The Market for New Housing in the Metropolitan Toronto Area

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Ontario Economic Council

R. A. Muller

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PREFACE

This study was commissioned by the Ontario Economic Council as part of its research programme in Urban Affairs. As originally conceived, the study was to rely on published work, original data collection and interview data to present a consistent view of the nature of competition in the market for new housing in Metropolitan Toronto and the surrounding areas. Although I received excellent co-operation from senior representatives of the major public real estate development companies, it became evident during the study that a detailed questionnaire survey of participants would founder on the twin rocks of low response rate and uninformative questionnaire design. Accordingly, the most important empirical contribution of this study is its use of data from the Ministry of Housing and municipal building departments to develop measures of concentration in subdivision and building and to provide some insights into the probable importance of economies of scale.

During the course of the study I have benefited from conversations with many persons. I would like particularly to thank George Fallis for his prolonged co-operation in shaping the course of the study, Richard Cole for his contributions to the background report prepared by Coopers and Lybrand, and to the participants in the review sessions organized by the Council, especially Jim Markusen and Dave Scheffman. I would like specifically to acknowledge the kind assistance of Brett Biggs Andy Derkowski, Bill Dew, Eph Diamond, Alex Grant, Lloyd Gunby, Eric LeBourdais, Bill McCance, Stu McFadyen, the staff of the Metropolitan Toronto Planning Department, Bob O'Dell, Mel Plewes, Somer Rumm, John Walker, Mel Wardman, Colin Westall and R.A. Wykes. In addition, I received excellent co-operation from the building departments of every area municipality in the Toronto Census Metropolitan Area. As usual none of the above bears any responsibility for the contents of this report. A special word

of thanks is due to my research assistants, Debra Browning, Mei Min Ip, Marie Melnichuk and Karen Scott, and to Debbie Parrish who produced magnificent typescript from an almost indecipherable manuscript. Finally, I wish to thank Janis, Krista and Elise Muller for putting up with me during the extended preparation of the final report.

Andrew Muller
June, 1977

CHAPTER 1

THE TORONTO HOUSING MARKET

"Every Canadian should be entitled to clean, warm housing"
Federal Task Force on Housing and Urban Development

Introduction

That all persons should be adequately fed, sheltered and clothed is a value widely shared the world over. Shelter is one of the three necessities of life, and many people look to governments to ensure its adequate provision. Basic housing is seen as a 'merit good' - a commodity which must be made available to all. The distribution of housing in Canada, however, relies heavily on the operation of private markets, since most housing is provided through purchase and sale of housing services either directly in the form of rental accommodation or indirectly in the form of the dwellings which provide those services. The institutions, formal or informal, which facilitate the exchange of dwellings or their services between buyers and sellers constitute the housing market, the subject of this study.

The operation of the housing market in Canada has become a matter for debate between those who see "a poorly functioning market with pervasive and major housing problems" and those who see "a reasonably well functioning market with only selected problem areas" (Smith, 1974b, p. 383). On the critical side, particular attention has been paid to the adequacy of housing for low income groups (Dennis and Fish, 1972). The general conclusion of those studying housing from this perspective is that much of the housing occupied by persons of low income does not meet the basic standards of repair, plumbing and heating established by the researcher. A second source of concern has been a dramatic rise in house prices, particularly over the period 1972-74. Subsequently, fear of rising apartment rentals has led to imposition of rent controls in Ontario and elsewhere.

Those taking an optimistic view of the housing market

believe that, although the supply of housing is inelastic in the short run, "in the long run the real resources for residential construction are potentially available in such volume that their supply will meet effective demand at current prices" (Smith, 1974a, 26). Consequently their focus has been on the demand side of the market, particularly on the influence of government policy on the demand for housing. The pessimists, on the other hand, see substantial problems on the supply side of the market. Derkowski (1975) has collected and analysed data on land development costs for ten urban centres across Canada and argues forcefully that restrictive government policies have constrained the rate of increase in housing stocks and have contributed to the recent price inflation. On a more popular level, Lorimer (1972 and 1975a and b) has attributed the malfunctioning of the housing market to the political and economic power of the major land development companies. This latter view appears common in popular and political discussion of housing issues.

This study is an analysis of the industrial organization of the market for new housing in the general area of Metropolitan Toronto. It was undertaken in the hope that a systematic survey of the structure of the Toronto area housing market, the conduct of firms in that market and the success of the market in meeting social goals would cast light on the concerns expressed above. The general approach, an accepted one in the literature of industrial organization, will be to consider first the basic issues of product and market area definition and then to review the theoretical and empirical evidence on the operation of housing markets generally. This is done in Chapters 1 and 2. In the third and fourth chapters, attention is given to the structure of the major input markets and the product market, respectively. Chapter 4 presents original data on concentration in subdivision approvals and building permits for Metropolitan Toronto and region.

The limited evidence on conduct of firms is reviewed in Chapter 5, and Chapter 6 assesses the performance of the market, with particular attention to the measurement of profit

rates and the housing indicators of the Economic Council of Canada. The study concludes with a discussion of the implications of the findings for public policy.

The Toronto Region

The Municipality of Metropolitan Toronto is the centre of an urbanized area spreading along the shore of Lake Ontario from Stoney Creek in the southwest to Oshawa in the east (see Figure 1). More than two million of the somewhat more than three million urban residents of the area live in Metropolitan Toronto. The political organization of the area has been altered by the recent establishment of regional governments patterned on the municipal organization of Metropolitan Toronto itself. Between 1972 and 1975 five regional governments were established: Hamilton-Wentworth, Halton, Peel, York and Durham. Each of these regional municipalities is subdivided into area municipalities corresponding to one or more former local municipalities. The area municipalities correspond in function to the boroughs of Metropolitan Toronto, of which there are six.[1] The regional municipalities are responsible for the provision of many basic services such as police protection and regional highways for the entire region, while the area municipalities retain control over local matters such as the administration of education, fire protection and social services. Both area and regional governments have important responsibilities in the planning and control of residential development. These will be explored in Chapter 3.

Because of the recent introduction of regional government, statistics relevant to the Toronto area are often not directly comparable with current political units. Most regional statistics are presented for Census Metropolitan Areas, which are intended to represent areas within which

[1] The five boroughs of Etobicoke, North York, Scarborough, York and East York, and the City of Toronto.

FIGURE 1: THE CENTRAL ONTARIO LAKESHORE URBAN COMPLEX
Source: Ontario, Central Ontario Lakeshore Urban Complex Task Force (1974)

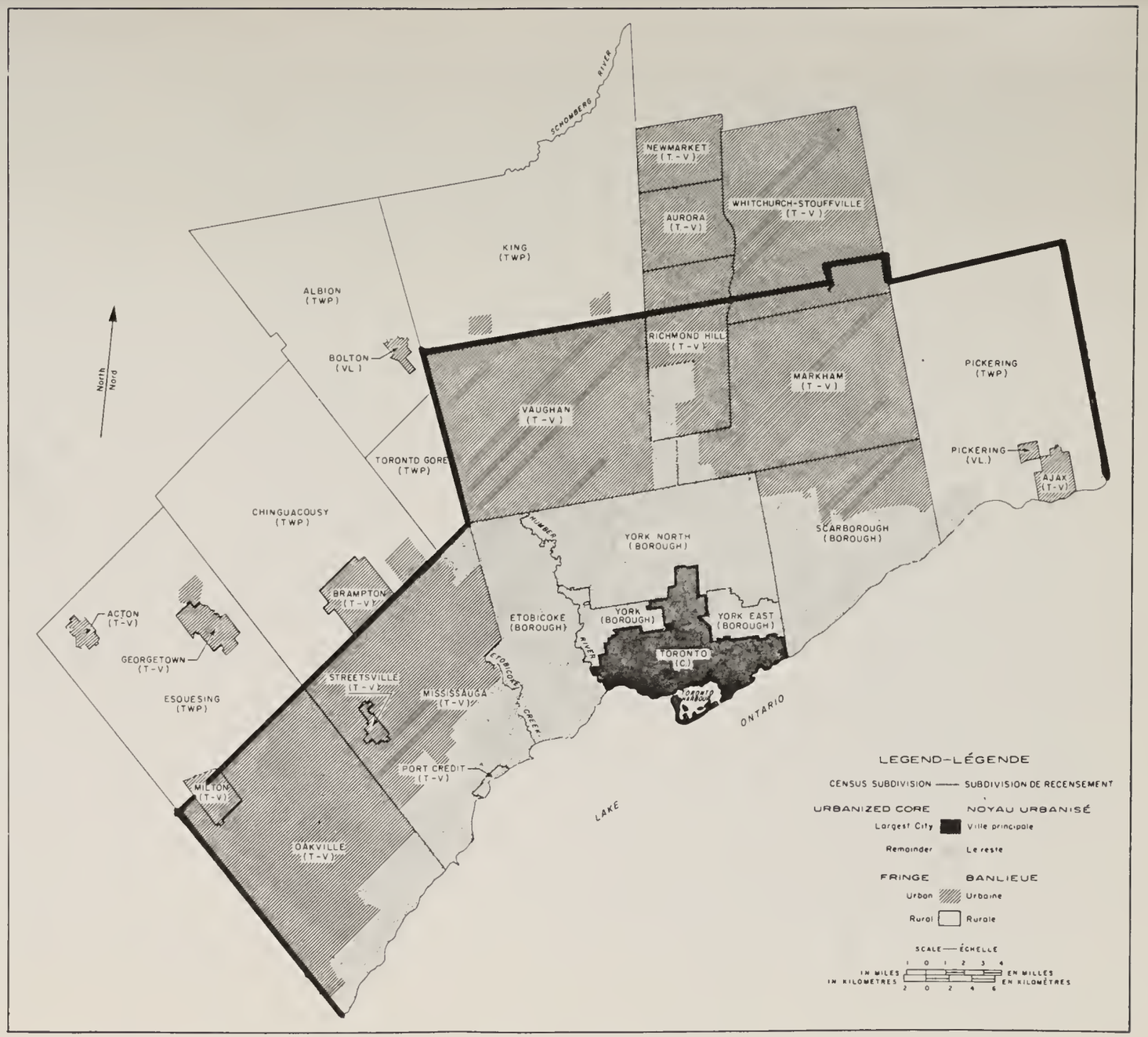


FIGURE 2: THE TORONTO CENSUS METROPOLITAN AREA (1971)
Source: Statistics Canada, 1971 Census of Canada (Bulletin 1.1-12)

people could normally change jobs without changing residence.[2] The 1971 census established two such areas in the Central Ontario region, Hamilton and Toronto. The 1971 Toronto Census Metropolitan Area is illustrated in Figure 2. For purposes of comparison, the 1966 area has also been illustrated. The 1971 population of the Toronto CMA was about 2.6 million. Metropolitan Toronto alone accounted for 80 percent of the total (see Table 1).

The degree of market power held by large developers depends partly upon their share of the market, and it is clear that this market share may depend upon the geographic area chosen for study. The geographic extent of a market may be defined either by the set of practical alternatives for a specific group of buyers or by the area over which a specified group of sellers compete as rivals. (Steiner, 1968, p.578). The

[2]The formal definition of Census Metropolitan Area is

"a continuous built-up area having 100,000 or more population and where the main labour market area corresponds to a commuting field or a zone where people could normally change their place of work without changing their place of residence.

It comprises:

(1) Municipalities completely or partly inside continuous built-up area, and

(2) Municipalities lying within a 20-mile radius of the limits of the continuous built-up area,

if (a) the percentage of labour force in primary activities is smaller than the national average, and

(b) the percentage of population increase for 1956-1966 is larger than the average for the 1966 Census Metropolitan Area.

When only (one of) (a) and (b) is met, municipalities are included if they are served by a highway of two lanes or more". (CMHC, Canadian Housing Statistics, 1974, p. 102)

TABLE 1: DISTRIBUTION OF POPULATION BY REGION, TORONTO, CMA, 1971

Regional Municipality[a]	Population ('000)	Percentage
Durham	47	1.8
Halton	100	3.8
Metropolitan Toronto	2,086	79.4
Peel	254	9.7
York	142	5.4
Total	2,628	100.0

Source: Statistics Canada (92-708)

[a]only that portion of the region within the Toronto CMA is included.

latter is an impractical guide to market definition in this case since, as will be seen below, the suppliers of new residential units vary widely in size and scope of operation from small local contractors to large corporations with developments across North America. Accordingly, it is best to focus on a target set of consumers such as those working in Metropolitan Toronto.

For workers in the municipality of Metropolitan Toronto, the practical alternatives for residence are limited by the time and expense of commuting to work. Table 2 shows the commuting patterns in the Toronto region inferred from 1971 Census data. The data indicate that 89 percent of workers in Metropolitan Toronto actually resided there. Of the remainder, 7.2 percent originated from York and Peel counties, most of which lie within the Toronto CMA, and a further 2.4 percent originated in Halton or Ontario counties, portions of which are in the Toronto CMA. Thus, 96 to 98 percent of Metro Toronto workers live within the Toronto CMA, and the area is certainly broad enough to encompass most practical choices of residence for these workers. However, for workers in some

TABLE 2: RELATIONSHIP OF HOME TO WORK: 1971 CENSUS (thousands of workers)

Workers in County	Residents of County									
	Wentworth	Halton	Peel	York	Ontario	Durham	Metropolitan Toronto	Region	Outside Region	Total Employment
Wentworth	136	11	-	-	-	-	1	148	8	157
Halton	7	42	3	-	-	-	3	55	2	57
Peel	-	8	56	1	-	-	28	93	3	97
York	-	-	-	32	1	-	12	46	2	48
Ontario	-	-	-	1	54	5	4	64	2	66
Durham	-	-	-	-	1	10	-	11	1	12
Metro	2	9	41	25	12	-	815	905	11	916
Region	145	70	100	59	69	15	864	1,322	30	1,352
Outside Region	6	3	3	2	2	2	17	34		
Total Resident Workers	151	73	103	61	71	17	881	1,356		

Note: Total Resident Workers includes all whose Place of Work was given, but excludes those whose Place of Work was not stated.

\- Less than 500.

Source: Lawson (1975)

other areas of the Toronto CMA, housing outside the region may be a more practical alternative than some housing within the region. For example, of workers in the Peel County in 1971, only 57.4 percent resided in Peel, 28.9 percent resided in Metropolitan Toronto, and 8.1 percent in Halton, part of which lies outside the Toronto CMA. Thus, the sets of alternative residences available to workers inside and outside Metropolitan Toronto overlap.

Although a precise geographic delineation of the Toronto new housing market cannot be made, the market area clearly extends beyond the borders of Metropolitan Toronto. Metro accounts for no more than one-half of all housing starts in the Toronto CMA, despite its much larger share of population (See Table 3). Thus some larger area must be considered. The Toronto CMA itself is most convenient for data collection, and largely overlaps reasonable alternatives, such as the 'Toronto Area' defined by the Metropolitan Toronto Planning Department (1974, p. 2) as the joint regions of Halton, Peel, York and

TABLE 3: HOUSING STARTS BY REGION, TORONTO CMA, 1975

Regional Municipality[a]	Housing Starts	Percentage
Durham	1,781	6.7
Halton	1,583	6.0
Metropolitan Toronto	12,981	49.1
Peel	6,820	25.8
York	3,292	12.4
Total	26,457	100.0

Source: CMHC, Ontario Region, "Housing Statistics"

[a]only that part of the regional municipality within the Toronto CMA is included.

Durham together with Metro Toronto. The major effect of choosing the Toronto CMA rather than the last grouping is to exclude the cities of Oshawa and Whitby from consideration, while choosing the CMA rather than the Planning Department's Toronto Area bring in Brampton, Bramalea and Oakville without including any areas which are clearly part of another metropolitan housing market. None of the conclusions of this study are strongly dependent on the precise geographic boundaries chosen for the market, since about three-quarters of all new residential construction has been occurring in Metropolitan Toronto, Brampton and Mississauga, areas which would be included in any reasonable market definition. Although most of the data presented refer to the Toronto CMA as a whole, the market concentration data presented in chapters three and four are disaggregated by regional municipality to provide insight into the structure of smaller submarkets.

The Product

Every dwelling, whether house or apartment, is a unique bundle of structural and locational characteristics. Some of these, such as the number of rooms, the floor area, and commuting time to major employment centres, may be measured, while others, such as design, are less easily quantifiable. The dwelling may be viewed as a capital asset which produces a unique set of services for its occupants. It is the flow of housing services from the dwelling which is of value to the consumer. These services may be obtained either by rental or by purchase of the dwelling itself. In the latter case the owner of the dwelling supplies housing services to himself; he may be considered as both paying and receiving an imputed rent equal to the foregone rental earnings of the dwelling.

Since each housing structure provides a unique set of characteristics, any grouping or aggregation must be largely arbitrary. Ideally, one would group together all dwellings (such as apartment units) which are closer substitutes for each other than for another group of dwellings (such as single family houses). The problem is that any one grouping will

generally not be relevant for all consumers. Thus a young married couple may consider a two-bedroom condominium apartment and a two-bedroom bungalow to be closer substitutes than the bungalow and a five-bedroom suburban house.

For statistical purposes all housing structures are aggregated in terms of dwelling units, defined as a set of living premises with a private entrance. The housing stock in the Toronto CMA was approximately 940 thousand dwelling units in 1976. Within this total the most important distinctions for which data are available are structural type and tenure. Table 4 indicates that in 1971 roughly one-half of the housing stock was comprised of single-detached houses while one-third was made up of apartment units.[3] The vast majority of the former were owner occupied while an even higher percentage of the latter were rented.

Single-detached, semi-detached and duplex, and row houses are sometimes collectively termed ground units. There is no *a priori* reason to believe that the three form separate submarkets; casual evidence suggests that the variation of characteristics within each class exceeds the variation between them. Again, casual observation suggests that most families with children prefer ground units to apartments over a wide

[3] These structural types are defined as follows:

> A "single-detached" dwelling is a building containing only one dwelling unit, which is completely separated on all sides from any other dwelling or structure. A "semi-detached" dwelling is one of two dwellings located side-by-side in a building, adjoining no other structure and separated by a common or party wall extending from ground to roof.
>
> A "duplex" dwelling is one of two dwelling units located one above the other in a building adjoining no other structure. A "row" dwelling is a one family dwelling unit in a row of three or more attached dwellings separated by common or party walls extending from ground to roof. An "apartment" dwelling unit includes all dwellings other than those described above, including structures commonly known as triplexes, double duplexes, and row duplexes. (CMHC, 1975, p. 100).

TABLE 4: OCCUPIED DWELLINGS BY STRUCTURAL TYPE AND TENURE, TORONTO CMA, 1971

	Number of Units	Percent of Total	Percentage	
			Owned	Rented
Single-Detached	354,965	45.9	90.1	9.9
Semi-Detached	97,485	12.6	77.5	22.5
Duplex	18,960	2.4	37.5	62.5
Row[a]	39,025	5.0	38.4	61.6
Apartment	263,280	34.0	2.6	97.4
Total	773,985	100.0	54.9	45.1

[a]Includes single house attached.

Source: Statistics Canada (93-727)

range of prices, so that there may be some basis for considering apartment units as constituting a distinct submarket.[4] The issue is chiefly important in considering the market power of large apartment owners.

New housing is frequently distinguished from previously occupied or 'resale' housing in popular discussion. On the demand side, newness can be considered a characteristic of a dwelling similar to any other characteristic, such as the number of rooms. A resale housing unit will generally be a closer substitute for a new housing unit with specified characteristics of location, size and design than would be another

[4]The independence of apartment and ground unit markets could be tested by comparing the variation over time of rentals on apartments with varying characteristics with monthly ownership costs for ground units of varying characteristics.

new unit with vastly different characteristics. For this reason it is not normally useful to divide the demand for housing into new and resale housing demand. The supply of new housing, however, is determined quite differently from the supply of existing houses, since the former is the result of construction decisions by entrepreneurs while the latter is largely predetermined by the physical stock of structures built in the past. In particular, the supply of new housing is a flow, expressed as a number of dwellings per unit time, while the supply of existing houses is essentially a stock, a pure number.

New housing has been added to the stock of existing housing in Toronto at a rate of about 4.4 percent a year over the past 10 years. This rate fluctuates considerably over time and by type of structure, as shown in Table 5. Data on housing starts may be used to estimate changes in the housing stock over time. The change in the stock of housing from one period to the next is equal to the number of housing completions over the period, plus conversions which increase the number of units in a structure, less removals and demolitions. Empirical work by Smith (1974a, p. 47) indicates that conversions are roughly equal to removals and demolitions over long periods of time, so that housing stocks can be estimated by cumulating completions. In Table 6, the assumption has been made that completions will be approximately equal to starts, and estimates of the stock of housing units of each type have been prepared.[5]

The Production of New Housing

The housing production process has been well described by the Ontario Housing Advisory Committee (1973). The major steps involved are shown in Figure 3. The process is best divided into two distinct stages: land development and

[5] In fact, cumulated housing starts probably over-estimate changes in stocks, since some dwellings are started but never completed.

TABLE 5: HOUSING STARTS, TORONTO CMA, 1966-1975[a]

Year	Single		Double[b]		Row		Apt.		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
1966	7,249	2.5	1,732	1.7	1,646	8.2	11,531	6.8	22,158	3.8
1967	6,789	2.2	2,067	2.0	1,970	9.1	21,212	11.6	32,038	5.3
1968	6,685	2.2	2,379	2.3	2,280	9.6	28,619	14.1	39,963	6.2
1969	6,005	1.9	2,649	2.5	1,838	7.1	21,923	9.5	32,415	4.8
1970	3,566	1.1	2,250	2.1	2,684	10.4	23,918	8.6	32,423	4.8
1971	6,972	2.0	3,670	3.2	2,577	6.6	21,990	8.4	35,209	4.5
1972	9,101	2.5	5,484	4.6	3,537	8.5	20,573	7.2	38,695	4.8
1973	8,039	2.2	3,857	3.1	5,927	13.1	19,874	6.5	37,697	4.4
1974	6,110	1.6	2,552	2.0	4,071	8.0	16,847	5.2	29,580	3.3
1975	7,338	1.9	3,598	2.7	4,744	8.6	10,777	3.1	26,457	2.9

[a]Percentages are of estimated housing stock for that year (Table 4)

[b]Semidetached and Duplex

Source: Calculated from CMHC, Canadian Housing Statistics, various issues. 1975 data CMHC, Ontario Regional Office.

building. Land development is the process of acquiring a block of land from its original owners (land assembly), planning the nature of the new dwellings to be constructed, obtaining approval from government agencies and installing the services of water supply, sewerage and roadways. The output of this process is a serviced lot or building site.[6] The building

[6]By a serviced lot is usually meant the site for a single-detached or double house (semi-detached or duplex). In this study the more inclusive term building site will be used to include both serviced lots and sites for the construction of row housing and apartments.

TABLE 6: ESTIMATED GROSS STOCK[a] BY TYPE
TORONTO CMA, 1966-75
(thousands of dwelling units)

Year	Single	Double[d]	Row	Apt.	Total
1966[b]	296	100	20	171	587
1967	303	102	22	182	609
1968	310	104	24	203	641
1969	316	106	26	232	681
1970	322	109	28	254	713
1971[c]	355	116	39	263	746
1972	362	120	42	285	809
1973	371	126	45	306	848
1974	379	129	51	326	886
1975	385	132	55	343	915
1976	393	136	60	353	942

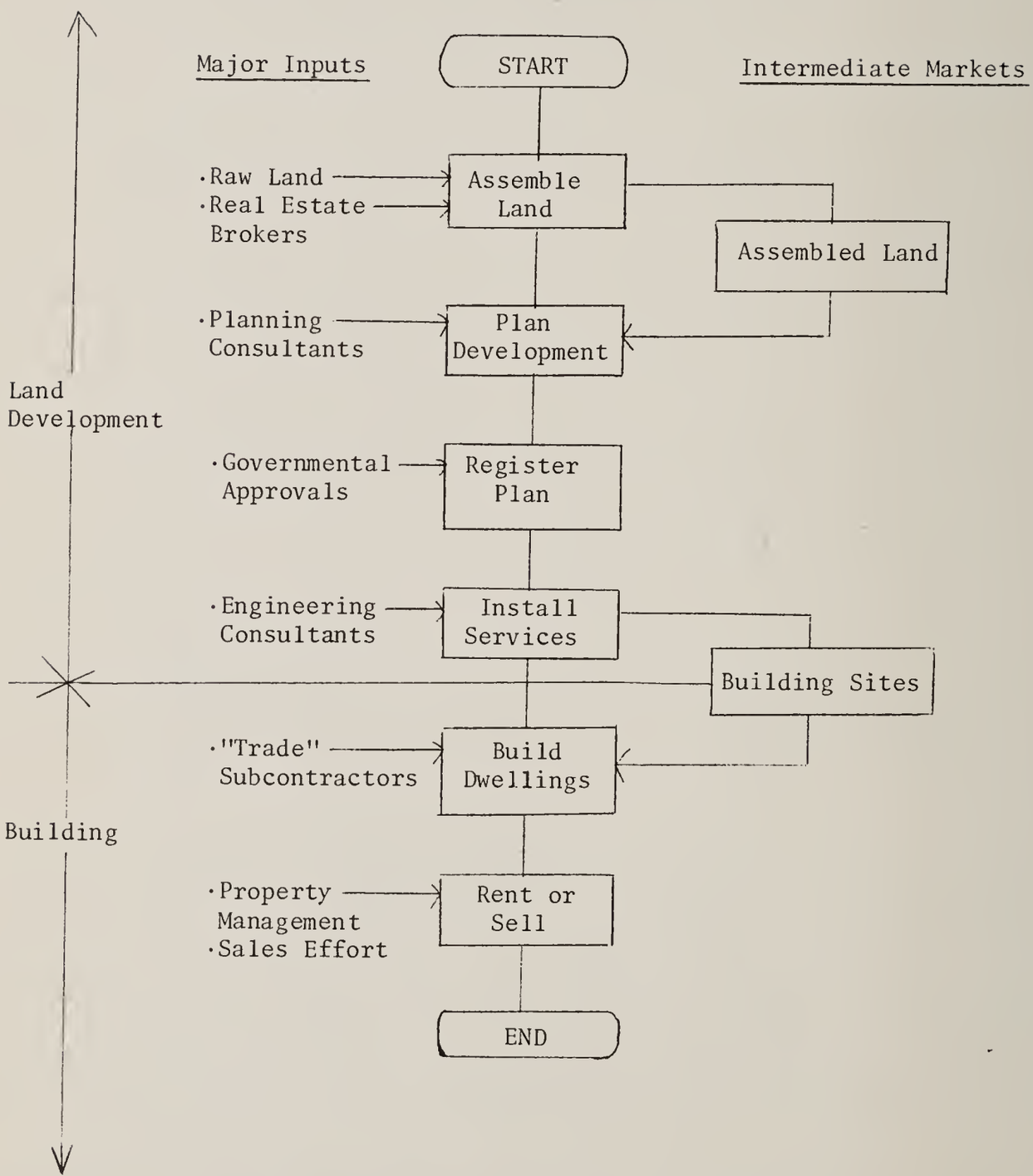
[a]Computed from Census estimates of occupied dwelling stocks for 1966 and 1971 by adding previous year's housing starts.

[b]1966 CMA definition for 1966-70.

[c]1971 CMA definition for 1971-75.

[d]Semidetached and Duplex.

FIGURE 3: A SIMPLIFIED VIEW OF THE HOUSING PRODUCTION PROCESS



process consists of the organization and supervision of the physical construction of new dwellings and their rental or sale. In the case of detached houses, builder and developer are often separate economic entities, while in the case of apartment dwellings the developer usually is also the builder.

Assembly of land may involve either the acquisition of large tracts of vacant land with the intent of developing and registering a plan of subdivision, or it may involve the acquisition of land in areas already substantially developed. The latter is termed infilling when vacant land is acquired and redevelopment when existing structures must be demolished. Redevelopment has been a controversial feature of the Toronto urban core in the past decade, since it usually involves the replacement of low density single family housing by high density apartment units, with consequent social disruption.

In either case, the assembler of land wishes to strengthen his bargaining power by concealing his intention from the current land owners. For this reason, a real estate agent specializing in land assembly may be commissioned to assemble the land. Real estate agents may also bring potential assemblies to a developer's attention and have knowledge about the extent to which other groups may be active in acquiring land in the same area.

Until the passage of the Ontario Land Speculation Tax, the assembly function was often separate from the remaining development functions. An intermediate market in assembled land was present, and some properties would change hands many times before development was complete. For example, land in the vicinity of Heart Lake north of Brampton changed hands five times between 1958 and the acquisition of a 50 percent interest by Consolidated Building Corporation in 1972. This arrangement also illustrates a common practice in which an active partner may acquire a share in lands held by a passive partner and manage the subsequent development.

After land is assembled, a plan for the development of the area is prepared. Planning consultants are used extensively at this stage. The planners work more or less closely with

representatives of municipal and provincial planning agencies and departments in the preparation of the plan. The plan is then submitted to the regional municipality and circulated to agencies of the federal, provincial,regional and area municipalities for comments. Depending upon the nature of the comments received, changes in the plan may be negotiated. Draft plan approval is then granted. After the conditions stipulated in the draft plan have been met, final approval is given and the plan of subdivision is registered. Until June 30, 1975, approval of subdivision plans was the responsibility of the provincial government. Since that date this power has been delegated to the regional municipalities.

In the case of redevelopment and infilling, no plan of subdivision is necessary. However, the planned use of the land will normally deviate from that currently stipulated in the zoning bylaws of the municipality, and if so a rezoning bylaw must be negotiated. This may be a time consuming process with the possibility of appeal as far as the Ontario Municipal Board.

Once the necessary zoning changes have been made and the plan of subdivision (if any) has been registered, construction may begin. In the case of ground units, a preliminary step is the servicing of the land. This is normally supervised by engineering consultants hired by the developer. In exceptional cases (for example, George Wimpey, Ltd.), servicing may be done by a servicing division of the development company. The standards for servicing are determined by the municipality and tend to be rising over time. Servicing costs have been estimated at approximately one-third of the price of a serviced lot in Mississauga, or twelve percent of the final selling price of a single family house. (Housing and Urban Development Association of Canada, 1975, p. 110).

Registration of land and installation of sewers is considered to mark the completion of land development. At this stage many development companies sell off all their building lots to independent builders, others build on a portion of their own lots. In new subdivisions considerable control

over the builder is exercised by the developer. All facets of construction from architecture to cleanliness of the construction site may be formally or informally controlled by the developer. Developers normally have a number of builders to whom they regularly sell lots. Lots may be sold through an agent or on the basis of informal tenders by builders. As noted earlier, apartment buildings will normally be built by the company which has assembled the land.

Builders organize and supervise construction, rather than performing it themselves. Subcontracts are let to an amazing number of trades - the Ontario Housing Advisory Committee lists seventy-two, (1973, p. 31) - on the basis of informal bidding. The builder's function is to organize, schedule and supervise the subcontractors and to minimize costs of production.

Sales or rentals of new units are normally made directly by the builder although on occasion real estate agents may be used. During the period of rapidly rising house prices up to early 1974 many ground units were built on a speculative basis; that is, construction preceded sale. Subsequently, most units intended for sale have been built on a "pre-sale" basis. Under such an arrangement the buyer signs an offer to purchase before the house is built, thus reducing the builder's risks. To promote these pre-sales, a builder of ground units will construct a model house or unit for demonstration purposes. Due to the differentiated nature of every housing project, the builder has some latitude in pricing his product. Sales of new units will depend in part on the quality of existing units in the vicinity. The developer captures some of the externalities associated with these factors by controlling the rate at which he offers building lots for sale and by the strict controls imposed upon independent builders.

Thus the supply of new housing may be characterized as a two-stage process. Land developers purchase raw land and produce building sites. Builders purchase building sites and produce new dwellings. A market for serviced lots connects the two stages, but many firms are vertically integrated,

especially those producing apartment houses.

The supply of new housing is the central focus of this study. The theory of price determination in housing and land markets is discussed in Chapter 2. Chapter 3 analyses supply conditions in the major input markets and Chapter 4 discusses concentration and other aspects of the structure of the housing and land markets.

Prices

Because dwellings are differentiated by location, size and other characteristics, there is no unique measure of housing prices. Table 7 provides representative data for the period 1966-1975. All the data series presented have serious deficiencies as measures of housing prices, but together they indicate that the price of houses in the Toronto area rose dramatically in the period 1972-74 while the increase in rentals was much more moderate.

The average value of all houses sold in Metropolitan Toronto has risen by 114 percent to $56,105 over the period 1966-75, with most of the increase occurring between 1972 and 1974. This is the best indicator available of transactions prices for existing housing, but it reflects shifts in the quality of housing being traded as well as changes in the prices of houses of given characteristics. For example, if for some reason many more two-bedroom bungalows than usual were sold in a particular area in a given month, the index of average house prices would be biased downwards, since these houses generally sell for less than larger houses. This bias is lessened but presumably not eliminated when observations are averaged over an entire calendar year for a wide area such as Metropolitan Toronto. Similarly if the average quality of house traded is positively correlated with the strength of the real estate market (for example, if large houses are sold more often during periods of rising real estate prices) or if there is a secular trend towards larger or more completely finished houses, an upward bias will be

introduced into the index. Nevertheless, the average price index clearly indicates a substantial increase in house prices.

The Statistics Canada index of new house prices avoids the problem of quality change by pricing sales of new houses of specific quality by major developers. It is clearly a preferable index, but is available only since 1971. It too indicates a rapid increase in prices over the period 1972-1974.

The house price indexes include single family dwellings, semi-detached houses and row condominiums, but exclude rental apartments. Some indication of the level of rents in the Toronto area can be gained from the housing component of the Toronto Consumer Price Index. This index is derived from the monthly Labour Force Survey and includes all forms of rental accommodation. It indicates that rents have been remarkably stable over the 10 year period, rising by only 36 per cent during the decade.

It has been claimed that the sampling technique used in the Labour Force Survey leads to a downward bias in the rent component of the CPI (Walker, 1975, p. 15). While this may be so, the source of the bias is not clear. The selection of units is unbiased, changes in quality of the unit rented are accounted for and rental changes between tenants are captured by the sample design. The major problem is that the index is formed by a chain of month-over-month rent increases in the rents paid by households in the Labour Force Survey. Since housing units stay in the survey only for six months at a time, it is not possible to compare the level of rent paid with the rent paid on the same unit one year or more previously. Consequently, if for some reason not all of the rent increases during the six-month sample period are reported and accordingly the index rises too slowly, there is no self-correction mechanism which will eliminate the error. As a result, the rental index may be subject to a downward drift of unknown magnitude and the low rate of increase in the

rental component should be treated with corresponding caution.[7]

Absolute dollar prices are misleading in times of inflation, since other prices and incomes may be rising at similar rates. Table 7 also provides information on the price of housing relative to the other items in the Consumer Price Index. An approximate index of Consumer Prices excluding shelter was constructed and used to deflate the nominal dollar indexes. It appears that the relative prices of new and resale houses were roughly steady until 1973. In 1973 and 1974 new house prices rose by about 16 and 12 per cent respectively while the relative price of resale houses rose by 7 per cent in 1973 and 19 per cent in 1974. In 1975 the relative price of resale was essentially constant while the relative price of new houses actually fell by about 11 per cent. Since 1971 the rental component of the CPI has shown a remarkable decline relative to other prices.

Summary

This chapter has considered the appropriate geographic definition of the Toronto housing market and has provided some detail on the nature of housing, on how new housing is produced and on the measurement and recent behaviour of housing prices. In Chapter 2, the mechanism of price determination in the market is investigated.

7 Loyns (1972, p.61) suggests that a downward bias is introduced when newly constructed units are rotated into the Labour Force Survey. If existing units rent at less than market rates because of adjustments lags, and if new units rent at the appropriate higher rate (because of cost-plus pricing by owners of new buildings), part of the price difference between the units should be attributed to a price increase rather than the quality change to which it is normally attributed. The annual downward bias in this case would be the percentage by which existing units were undervalued times the rate at which new units were being added to the stock. If these values are 10 percent and 5 percent respectively, the bias would be of the order of 0.5 percent per year. This does not seem severe.

TABLE 7: HOUSING PRICE INDICATORS, TORONTO 1966-75

	Indexes 1971=100					Indexes of Relative Prices[e]		
Year	Average Value, All Sales[a]	Average Value, All Sales	New House Prices[b]	Rental Component Toronto CPI[c]	Consumer Price Index[d]	Average Value, All Sales	New House Prices	Rental Component Toronto CPI
1966	26,160	83.3	n.a.	82.1	85.8	97	n.a.	96
1967	28,218	89.8	n.a.	86.4	88.5	101	n.a.	98
1968	30,203	96.2	n.a.	90.8	91.7	105	n.a.	99
1969	29,678	94.5	n.a.	94.1	95.3	99	n.a.	100
1970	31,122	99.1	n.a.	98.1	97.8	101	n.a.	100
1971	31,406	100.0	100.0	100.0	100.0	100	100	100
1972	32,794	104.4	110.2	101.3	104.6	100	105	97
1973	37,758	120.2	137.6	102.9	112.8	107	122	91
1974	50,381	160.4	171.6	105.8	126.4	127	136	84
1975	56,105	178.8	170.8	112.0	141.0	127	121	79

[a]Total Value of all house sales divided by total number of house sales. Toronto Real Estate Board, House Price Trends (1976, p. 43).

[b]Index of Price of new houses of specified characteristics sold by largest builders. Statistics Canada 62-007 and CMHC.

[c]Index of rents paid by respondents to Labour Force Survey. Statistics Canada, Prices Division.

[d]Canada, all items excluding shelter index. Computed from Statistics Canada data using 1974 average weights reported in the Canadian Statistical Review.

[e]Calculated by division of relevant series by the Consumer Price Index.

n.a. - not available.

CHAPTER 2

ANALYSING HOUSING MARKETS: THEORY AND EVIDENCE

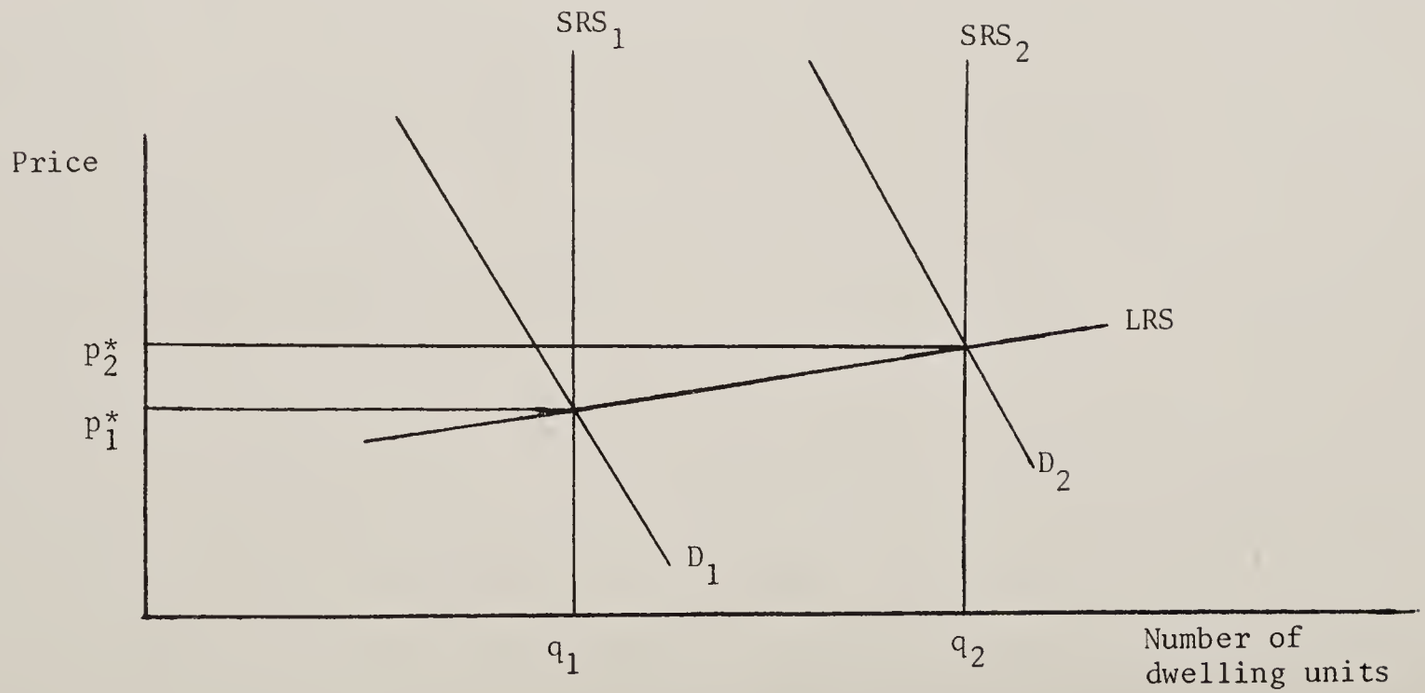
Introduction

To resolve competing hypotheses about the operation of the housing market, indeed to organize material concerning it, will require some attention to simple models of the housing and land markets. In this chapter, a distinction is drawn between long-run models of the demand for and supply of housing stocks and shorter run models which focus on the relation between the existing housing stock and the flow of new housing. The former are useful in characterizing the demand for new housing and for investigating long-run trends in housing prices. The latter allow more detailed discussion of whether housing markets allow the exercise of market power by the suppliers of new housing and of the ways in which government regulation might affect housing prices and quantities.

It is common to picture the price and quantity of a commodity as being determined in the long run by the intersection of the demand curve for the product with the long-run supply curve, as shown in Figure 4. In the context of the housing market it is important to note that the horizontal axis measures the stock, or absolute number, of dwellings units rather than the flow of dwelling units supplied or consumed per year or other time interval. If demand were perfectly stationary at D_1 and the market were in equilibrium, the stock of dwellings would be constant at q_1 while the flow of new dwellings would be precisely equal to the rate at which old dwellings were being removed from the stock. Since housing units are typically very long lasting, this annual flow would be a small fraction of the total stock.

If for some reason the demand for housing were to shift rightwards to D_2, the equilibrium quantity would rise to q_2. The new long-run equilibrium price, $p\overset{*}{2}$, would be higher than the old, $p\overset{*}{1}$, if the long-run supply curve were positively sloped. Thus, an important issue in analysing long-run trends

FIGURE 4: THE DETERMINATION OF HOUSING PRICES IN THE LONG RUN



in housing prices is the price elasticity of the long-run supply curve.

This picture excludes consideration of the process by which the housing market adjusts to a new equilibrium position. Since the planning and construction of new dwellings requires several months, if not years, since demolitions are infrequent and since the annual flow of new housing is typically less than five percent of the existing stock, it is useful to think of the supply of dwellings as perfectly price inelastic at any particular time. This is shown by the vertical line SRS_1 in Figure 4. When demand shifts rightwards, the immediate effect is to increase prices by an amount related to the elasticity of demand. The new higher price induces an increase in the flow supply of new housing, and the short-run supply curve shifts rightwards at a speed which depends on the rate at which new housing is built. Not until the short-run supply curve reaches SRS_2 does the price decline to the new long-run equilibrium price p_2^*. At this price, the rate of new construction once again equals the rate of withdrawal from the stock.

Thus the market for new housing is, by its very nature, a flow market which mediates the adjustment of the stock market for housing. Consequently it is affected by the determinants of demand and long-run supply of the housing stock as well as by factors constraining or promoting the rate of output of new housing. These determinants are reviewed in the following sections of this chapter, beginning with the demand for housing services and for the housing stock and subsequently considering the long-run supply of housing, stock-flow models of housing markets with particular attention to the scope for market power, and finally the complications introduced by product differentiation and integration of firms in residential land development, building and closely related activities.

The Demand for Housing

1. Housing Services

As noted above, the demand for housing structures or dwellings is derived from the demand for housing services. To simplify matters, it is convenient to assume that all housing characteristics can be reduced to a single dimension measuring housing services. Every family or individual will have a demand for housing services which, like any other demand, will be a function of income, the price of housing services, and all other prices. It will also be a function of the demographic characteristics of the family. Accordingly, the aggregate demand for housing services in a region will be a function of demographic variables, especially the size and age distribution of the population, average family income and its distribution across families, the rental price of housing services and other prices in the economy. For owner occupants, the rental price of housing services can be imputed from the capital value of the house as discussed below.

Estimates of the responsiveness of the demand for housing services to price and income changes can be obtained by regressing annual expenditure on housing on income and price variables. There is an extensive literature on the elasticity of housing demand dealing primarily with the United States (for example, de Leeuw (1971), Carliner (1973) and Polinsky (1975) and further references cited therein). Estimates of income elasticity based on time series data are typically lower than those based on cross-sectional data, and within the latter group estimates based on individual data are lower than those based on inter-metropolitan comparisons. The lack of appropriate price data has led to the estimation of misspecified equations. Polinsky (1975) shows that under reasonable assumptions the microdata estimates of income elasticity are biased downward when the true price term is omitted and that inclusion of the average price for each city worsens the bias. In addition to problems of misspecification, income elasticity estimates may be biased due to the use of asset values for

houses rather than annual housing expenditure and by the common failure to include imputed rental income of home owners in the income term (de Leeuw, 1971, pp. 2-3).

After reviewing the U.S. evidence, Polinsky concludes that "the true income elasticity lies between 0.6 and 0.9 for renters and 0.7 and 1.7 for owners". Smith (1974a, p. 30) concludes after a similar review that the range is 0.6 to 1.0.

Evidence on price elasticity of demand is less firm. Polinsky demonstrates that the use of city average prices in micro regressions biases the estimate of price elasticity toward zero. Good price indices are not common for inter-city comparisons and are generally unavailable for individual data. Most estimates from the correctly specified equations examined by Polinsky centred around -0.75 (p.20). Smith (1974a, p. 21) estimates that the price elasticity of the demand for the housing stock, unadjusted for quality change, is about -0.35. Demand for housing services would be more price elastic. Smith opts for a range of -0.8 to -1.0 as reasonable.

Demographic factors, such as age and size of the household, affect the income elasticities of demand (Carliner (1973), p. 531) and presumably also the price elasticity of demand as well as the position of the demand curves. Carliner's results indicate that the income elasticity of demand is highest for families with heads in the 35-64 year age group.

With the exception of households sharing accommodation with other households, the number of occupied dwellings units in an area equals the number of households, so that it is natural to decompose the change in the number of units occupied into net family formation, net non-family household formation and net undoubling. These are often treated as the primary demographic variables underlying the demand for housing services, but they clearly reflect the outcome of adjustments mediated by the housing market rather than determinants of that outcome. For this reason projections of housing demand by projecting trends in the three variables may cover up important adjustment mechanisms. It would be preferable to consider the

primary demographic factors to be the size and age distribution of the population. The hypothesis is then that, ceteris paribus, the demand for ground units (suitable for families with children) will depend positively on the population of child-rearing age (say 25-55) while the demand for rental accommodation will depend positively on the population in older and younger age categories (compare Smith (1974a), p. 28). The rise in births in Canada directly after World War II is now being reflected in rapid increases in the population cohorts from 25-35. Thus the demand for ground unit accommodation has been increasing much more rapidly than the overall population. Illustrative data is provided in Table 8.

2. Demand for the Housing Stock

The demand for dwellings, that is, for assets which yield housing services, is derived from the price of housing services per unit time. This is true both for owner occupants and for owners of income property (landlords). The amount an investor is willing to pay for an income property depends ultimately on the net rental income expected from that property but is heavily influenced by rules governing the taxation of rental income, by the deduction of capital cost allowances, and by the leverage factor or loan-to-value ratio he can obtain in financing the investment. The precise relationship among these factors can be specified.

The after-tax cash flow from an income property is equal to the rental income (r_t) less operating expenses (c_t) and mortgage interest $i\ell V$ where V is the capital value of the property and ℓ is the ratio of loan to value, plus any tax saving which accrues from the ability to deduct capital cost allowances from rental or other income. The maximum price, V, which an investor will pay for a property is the V for which the present value of the cash flow just equals the owner's initial investment $(1-\ell)V$. It is shown in Appendix A that this maximum value V is given by

$$(1) \qquad V = (1-m)P/(i_4/i_2 - mS)$$

where i_2 is the investors opportunity cost of capital, m is the

TABLE 8: ESTIMATED POPULATION BY SELECTED AGE GROUPS, ONTARIO, 1966-75

Year	Age Group					
	20-24		25-29		30-34	
	No. ('000)	Increase (%)	No ('000)	Increase (%)	No ('000)	Increase (%)
1966	485.1		433.9		447.2	
1967	523.6	7.9	454.1	4.7	450.9	0.8
1968	560.5	7.0	475.4	4.7	453.0	0.5
1969	595.4	6.2	500.8	5.3	455.8	0.6
1970	637.6	7.1	533.3	6.5	465.7	2.2
1971	674.1	5.7	567.4	6.4	478.1	2.7
1972	696.5	3.3	599.7	5.7	494.1	3.3
1973[a]	684.1	1.5	649.0	5.6	522.2	4.9
1974	709.7	3.7	684.6	5.5	553.9	6.1
1975	735.4	3.6	713.5	4.2	581.4	5.0

Source: Statistics Canada, Estimated Population by Sex and Age Group, for Canada and Provinces

[a]In 1973 the method of estimation used by Statistics Canada was changed, so that the 1973 data are not strictly comparable to the 1972 data. Percentage increases for 1973 have been computed with 1972 data revised to conform to the 1973 data. The revised population estimates for 1972 are 674.0, 614.4 and 497.6 for the three age groups.

marginal tax rate, i_4 is the average of the after-tax mortgage interest rate $(1-m)i_1$ and the opportunity cost of capital, i_2, weighted by the loan to value ratio, ℓ, and S is the present value of the capital cost allowances available expressed as a fraction of V.

Equation (1) states that the value, V, of an income property to an investor is equal to the present value of net rentals after income tax adjusted by a factor $1/(i_4/i_2 - mS)$ which reflects the combined influence of leverage and the deduction of capital cost allowances from income. It is clear from the equation that any factors reducing expected net rentals, such as the imposition of unanticipated rent control or increases in property taxes, will reduce the value of income property and hence shift the demand curve for such property downwards. Any reduction in the average cost of capital, i_4,

whether through reductions in mortgage interest rates or increased leverage, will increase the value of the income property and hence shift the demand curve upwards. Similarly, any liberalization in the degree to which capital cost allowance may be used to offset other income will increase S and hence increase the demand for income property. In the appendix it is shown that increases in marginal tax rates will also increase the value of rental property to its owners.

If a dwelling is occupied by its owner, the owner saves an amount equal to the rent he would pay for the accommodation elsewhere. This imputed rent is free of income tax, but the occupant is denied the ability to deduct capital cost allowances from his income. Under these circumstances the value of a property to an owner occupant is

$$V_0 = [(i_3/i_2)P] \tag{2}$$

where i_3 is the average of the before-tax mortgage interest rate and the opportunity cost of capital weighted by the loan to value ratio, ℓ, and P is the present value of expected net rentals. It is demonstrated in Appendix A that when there are no restrictions on the use of capital cost allowances to offset other income, an investor can usually outbid an owner occupant for a given property provided both have the same opportunity cost of capital and both have the same expectations about the future path of rents and operating costs. An owner occupant can always outbid an investor whose rates of discount and mortgage interest are the same if no capital cost allowance can be claimed.

In the preceding discussion it was assumed that all purchasers plan to hold their property in perpetuity. In reality, of course, properties are bought and sold and purchasers may realize capital gains. If all participants in the market had perfect foresight, the rate of change in the capital value of the house would precisely equal the change in the capitalized value of its expected future earnings and the price bid by an investor would be independent of the length of time he expected to hold the asset. If for

some reason, the asset prices are expected to rise more quickly than the capitalized value of net rents, an investor may pay more for the property than the value indicated by equation (1). The result will be to shift the demand for the housing stock rightwards and to increase the price of housing, at least in the short run. The faster the expected rate of increase in asset prices, the more an investor or occupant will be willing to bid for a dwelling. This phenomenon cannot be sustained over long periods of time, however, since ultimately the expected rate of price increase is not maintained, expectations are revised and prices fall to the point where they are once more consistent with the discounted future earnings of the property.

The Supply of Housing

1. Housing Services

The supply of housing services per unit time is essentially determined by the physical housing stock. Consequently it is very price inelastic in the short run, although not perfectly so, since at high prices house owners may actively seek to rent marginal dwelling units such as basements and attics which would otherwise be unoccupied. In addition, some houses can be converted fairly quickly for use as multiple dwellings. Nevertheless, it is not seriously misleading to consider the short-run supply of housing services to be very inelastic. In the long run, the supply of housing services will be as elastic as the supply of the housing stock.

2. Housing Stock

At any time, the stock of completed dwelling units is fixed. It may only be altered through the net effect of additions, demolitions and conversions. The rate at which net additions to the stock are made will normally respond to changes in the price of housing. This is consistent, however, with a perfectly elastic supply of housing in the long run if the production of new housing is a constant cost industry. The issue is important, for if the supply of housing is less than

perfectly elastic, urban growth will tend to drive up the price of housing relative to other goods and a secular upward trend in house prices should be observed.

The long-run supply of housing will be inelastic if some factors of production are in inelastic supply and if it is difficult to substitute away from the factor of production whose price is rising. Theoretical analysis suggests that the price of land should rise over time with urban growth, and empirical estimates typically find elasticities of substitution of less than unity between land and non-land inputs into production. This in turn implies that the share of land costs in housing prices should rise with urban growth.

Much effort has been devoted to specification of general equilibrium models of urban growth (see, for example, Solow (1973), Mills (1972) and Muth (1969)). These models are explicitly spatial in orientation, although they become mathematically quite complex even for heroic simplifications of the spatial structure of cities. In all, rent (or the price of land) is determined as a function of distance from the city centre by the conditions that households and firms be indifferent as to location when equilibrium prices prevail and that aggregate demand for land equal the aggregate supply. The rent function determined by these conditions is typically a decreasing function of distance from the core, and it is possible to investigate the way in which this rent gradient changes in response to changes in population, income and transportation costs.

By investigation of such models, or by analogy to the Ricardian theory of differential rent (Stonier and Hague (1963) ch. 13), it can be concluded that urban growth will typically lead to increases in the rental price of land at any given distance from the centre of the city. This will be expected to lead to a general increase in the price of housing services which will be mitigated to the extent that non-land inputs can be substituted for increasingly expensive land. This substitution is manifested in higher density housing developments and apartment buildings.

Efforts have been made to estimate both the long-run elasticity of supply of the housing stock and the elasticity of substitution between land and other inputs. Barton Smith (1976) reviews evidence from Muth (1969 and 1971), Koenker (1972), Grieson (1971) and de Leeuw (1970) most of whom obtain an elasticity of substitution of less than unity but who disagree on the elasticity of supply, with estimates ranging from about 2.4 to 15 for quantity and 0.3 to 0.7 for quality. Smith himself obtains price elasticities of about 5 and 4 for the density and quality of the housing stock respectively and an implicit estimate of approximately 1.2 for the elasticity of substitution.

The above estimates are all based on United States data. Supply conditions in the Toronto housing market may differ appreciably from those in the United States, but there is little empirical evidence of the sort just discussed. Accordingly, any assessment of supply conditions must be based largely on the qualitative considerations presented below.

Stock-Flow Models of Housing and Land Markets

The preceding discussion has focused on the demand and long-run supply of the housing stock. It remains to investigate models of the flow market for new housing and its relation to the market for housing stocks. Because land development is not always integrated with residential construction, the relation between the markets for new housing and serviced land must be explored, with particular attention to the scope for market power. It is concluded that a simple model of equilibrium in stock-flow markets suggests that suppliers of new housing cannot exercise substantial market power by cartelization or collusive behaviour. However, the level of house prices will be affected by sustained changes in the flow of new housing construction. Closer examination of this model in the context of related markets for serviced land and housing suggests that land developers may have some scope for market power in the serviced land market. The exercise of this power does not require the developers to integrate downstream into house-building. The presence of spatial differentiation strengthens

the presumption that developers will possess some degree of market power, power which varies with the extent of the developers' holdings. Finally, it is suggested that integration of residential and non-residential development does not necessarily lead to increased market power.

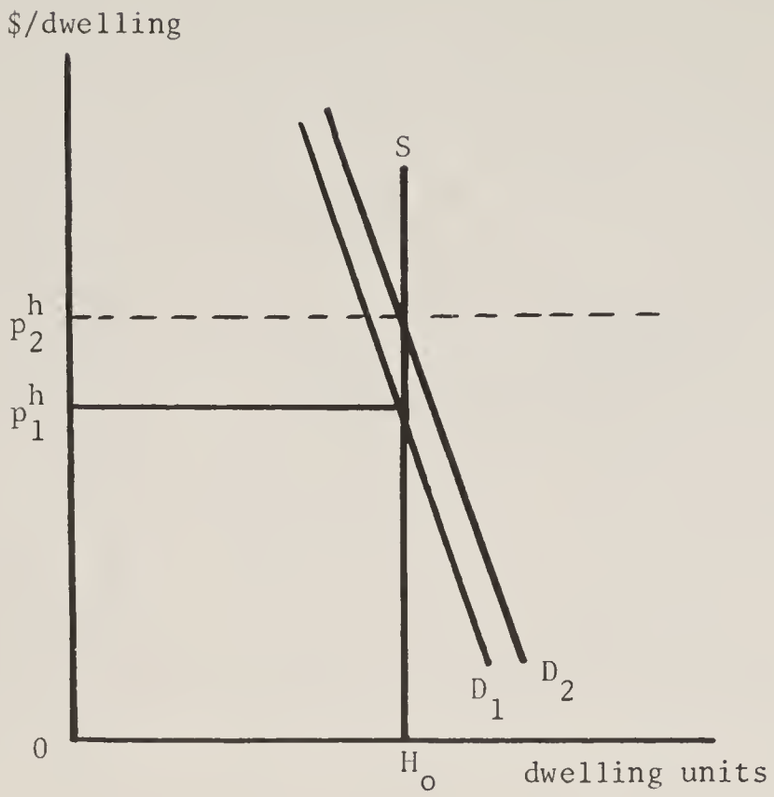
1. The Market for Housing

The simplest stock-flow models of housing markets suggest that the price of housing is determined by the demand for the housing stock and that the rate of addition to the housing stock, the flow of new housing, is determined by the price set in the stock market.[1] This is illustrated by Figure 5. Assume that all housing can be aggregated in terms of homogeneous dwelling units. At any instant the total of these dwellings is fixed, say at H_o. The price of dwelling units will be determined by the intersection of the vertical supply curve with stock demand curve D. The stock demand will depend on the demand for housing services and on financial variables as discussed above.

Provided the annual flow of new housing is small relative to the stock of existing houses, a large relative change in annual production will represent but a small percentage change in the stock after one year, so that the price of the stock will not be altered substantially. Accordingly, it is reasonable to assume price-taking behaviour by builders. Each builder adjusts his output until marginal cost equals price, and the sum of the corresponding outputs is h_1, the annual flow of production. The short-run supply curve, SRS, rises not only because marginal costs for individual builders rise with individual output, but also because the prices of specialized inputs such as labour and certain materials rise as the market demand for them increases, at least in the short run. The long-run supply of new housing, LRS in Figure 5(b), will be

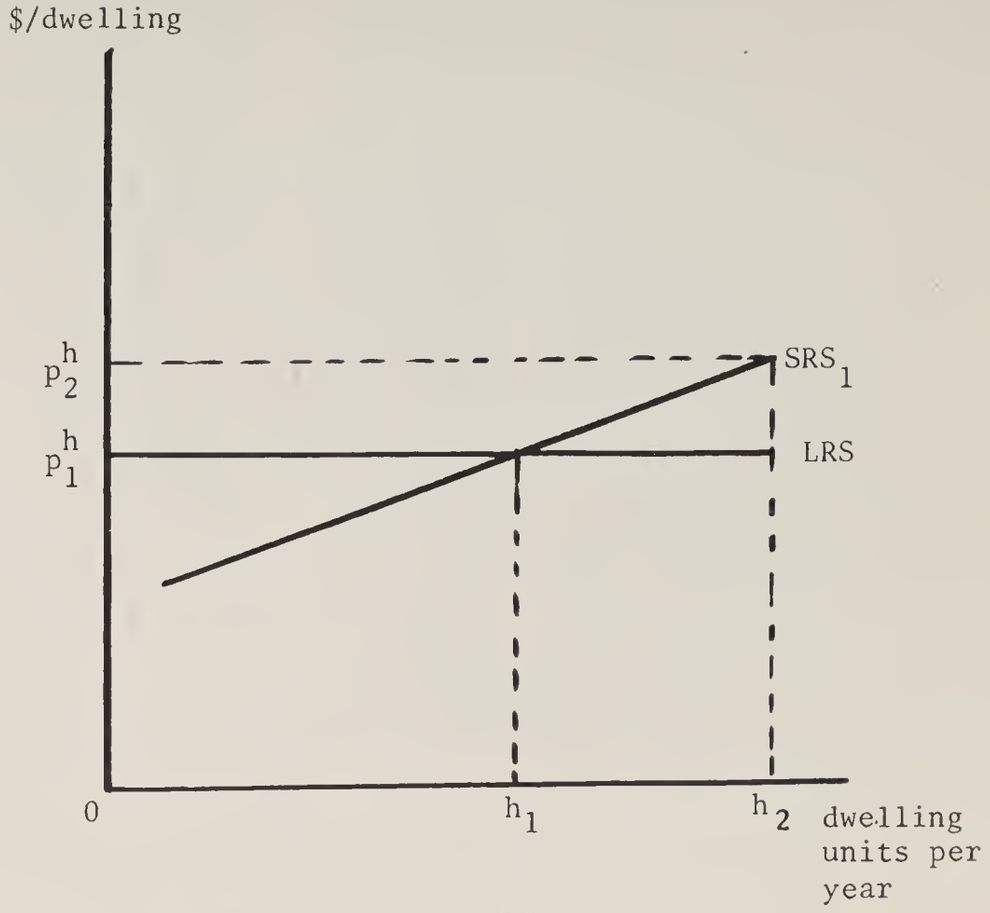
[1] The following model is essentially the same as the one used by Smith (1974a, ch. 2).

FIGURE 5: HOUSING STOCKS AND FLOWS



(a)

Stock Market for Housing



(b)

Flow Market for New Housing

more elastic than the short-run supply curve because builders may enter or leave the industry depending on its profitability. The long-run supply of new housing will have a positive slope only if the price of specialized inputs rises with the flow demand for new housing as would be the case, for example, if there were an effective barrier to the entry of skilled tradesmen. This should be distinguished from a rise in the price of specialized factors, noticeably land, with the stock of existing housing. It was seen above that there appears to be some positive slope in the long-run supply curve of land. This would be reflected in an upward shift in the long-run supply curve of new housing as the minimum average cost per dwelling unit rises for all builders.

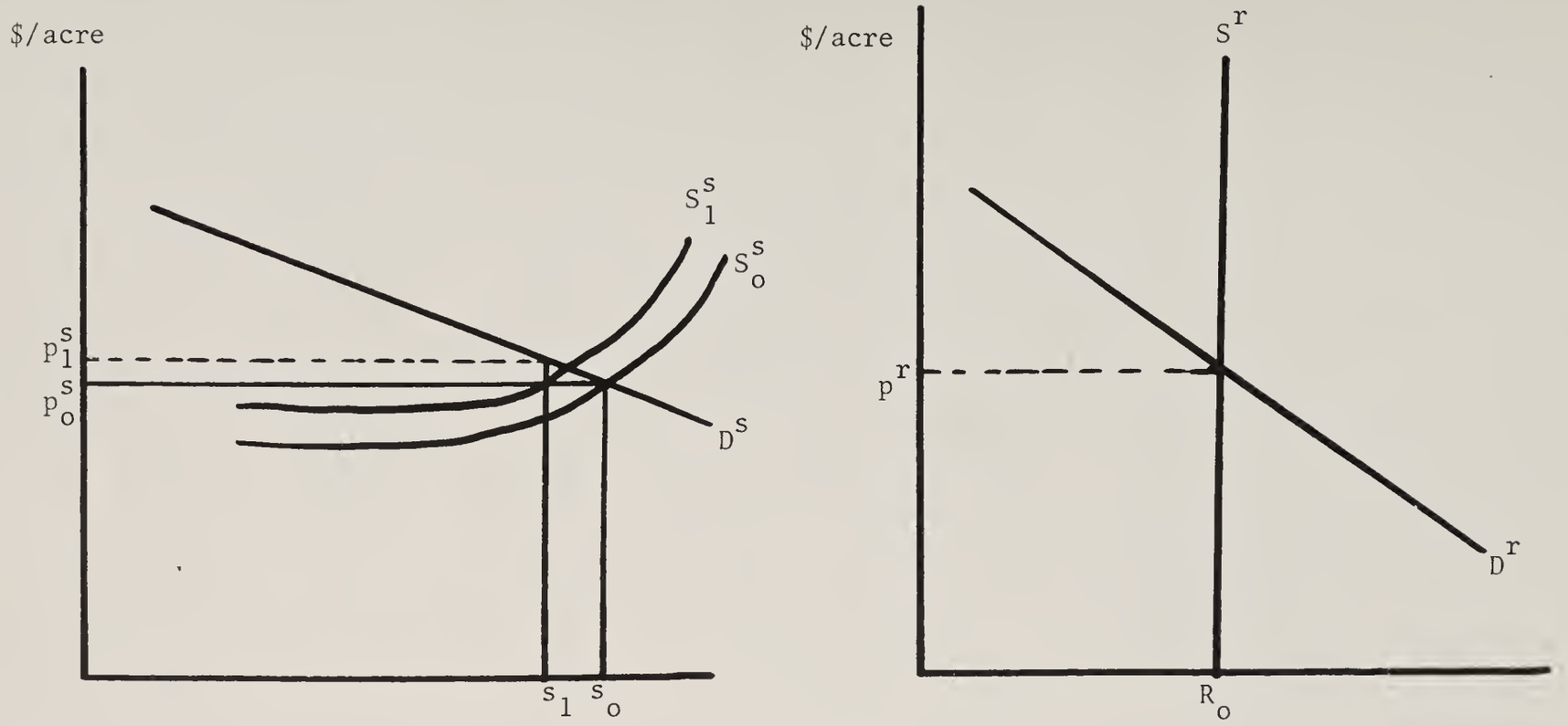
To observe the properties of this model, suppose the market to be in long-run equilibrium at price p_1^h and stock H_0 of dwelling units. Consider the effect of a sudden increase in the demand for housing stocks, say from D_1 to D_2. The price of the stock rises from p_1^h to p_2^h. In the short run, the flow of new housing increases from h_1 to h_2 units per year. Provided h_2 is greater than the growth rate of demand, prices begin to fall. Simultaneously, new builders may enter the industry causing the short-run supply to shift rightwards. This will continue until the long-run equilibrium price p_1^h is reached. If the rate of growth of supply equals that of demand, equilibrium has been achieved. If the former is greater, prices continue to fall until builders are driven out of the market and once again prices rise.

Notice that the long-run equilibrium price is unchanged at p_1^h unless the long-run flow supply curve is shifted upwards due to the increasing scarcity of land or some other factor of production.

2. The Market for Serviced Land

The major inputs to housebuilding are construction services and serviced land. The demand for each of these is, therefore,determined simultaneously with the supply of new housing. The demand for serviced land is shown in Figure 6.

FIGURE 6: THE MARKET FOR SERVICED LAND AND RAW LAND



The quantity of serviced land demanded will depend positively on house prices (p^h) and negatively on the price of other inputs such as construction services. The supply price of serviced land is determined by the marginal cost of developing it (including planning and servicing) and by the opportunity cost of the raw land, embodied in it. This opportunity cost (p^r) is the price of raw land, which in turn will be determined by the supply and demand for the stock of raw land. The raw land market will be in equilibrium only if the current price equals the present value of the expected price at any time in the future less the present value of expected carrying costs. Raw land costs, therefore, depend critically on expectations concerning the future value of the land.

Consider now the effect of a policy which increases the marginal cost of developing land. Examples would be municipal taxes on subdividers or increased requirements for the dedication of land to public use. This would shift the supply of serviced land upwards and from panel (a) of Figure 6 it is clear that the price of serviced land would rise. Since serviced land is an important input into building, the short-run supply curve of new houses (SRS_1 in Figure 5) would shift leftwards and the rate of growth of the housing stock would decline relative to that of demand. The initial effect is to cause house prices to rise more rapidly than they would have done otherwise. Since the long-run supply curve of new housing also rises, the new equilibrium price is higher than it was before.

The effect of an increase in the cost of servicing land can also be demonstrated directly in Figure 5. Since the price of serviced land has risen, the long-run supply curve of the housing stock will also have risen. This leads to a higher equilibrium price and a lower equilibrium stock if demand is unchanged. Of course, this alternative demonstration leaves out any discussion of the process of adjustment.

Arguments similar to the preceding show that an increase in the expected <u>future value</u> of raw land will raise current house prices by restricting growth of the housing stock. Such

a change in expectations would increase the speculative demand for raw land and hence the current price (or opportunity cost) would rise. This would lead to an upward shift in the supply of serviced lots, as in the previous case, with similar consequences.

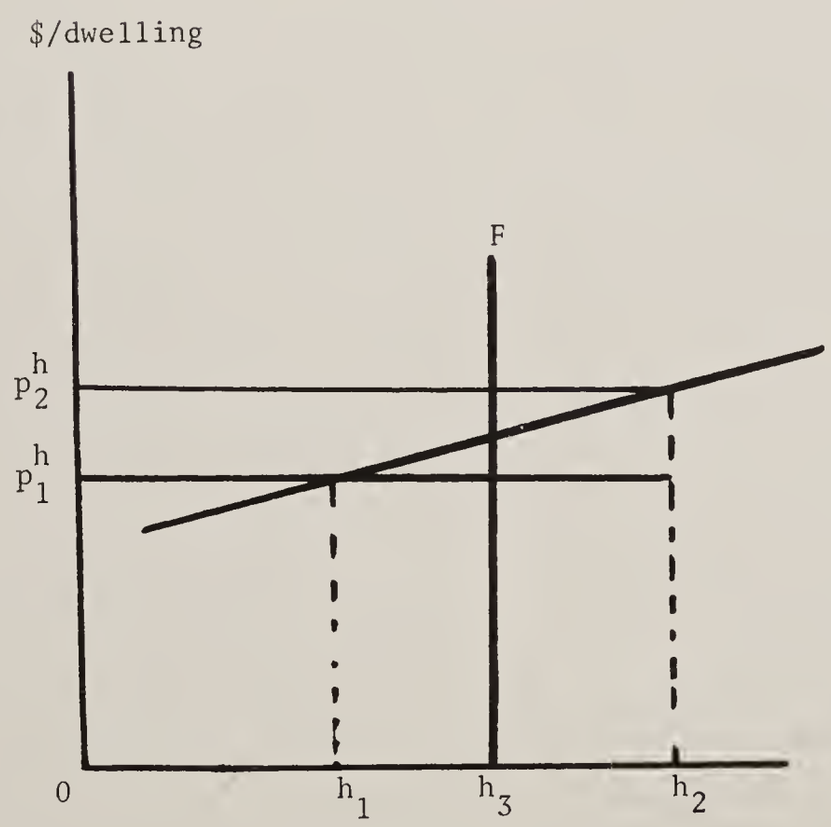
3. Constraints in the Supply of Serviced Lots and Buildings

This simple picture of the housing and land markets is complicated by the presence of several constraints on the rate at which new dwellings and serviced lots can be provided. The first is the possible existence of rationing of mortgage funds discussed by L.B. Smith (1974a, pp. 19, 56) and supported by his empirical results. When the demand for loanable funds in other sectors of the economy is high relative to the supply, either due to monetary stringency or economic expansion, the ability of smaller builders to obtain mortgage financing is restricted. This financing constraint, F in Figure 7, may reduce the flow of new dwellings if it lies to the left of the unconstrained equilibrium output, h_2. Whether the constraint is binding depends in part on the price of houses. For a lower price level (p_1^h), the finance constraint lies to the right of equilibrium output and is not binding.

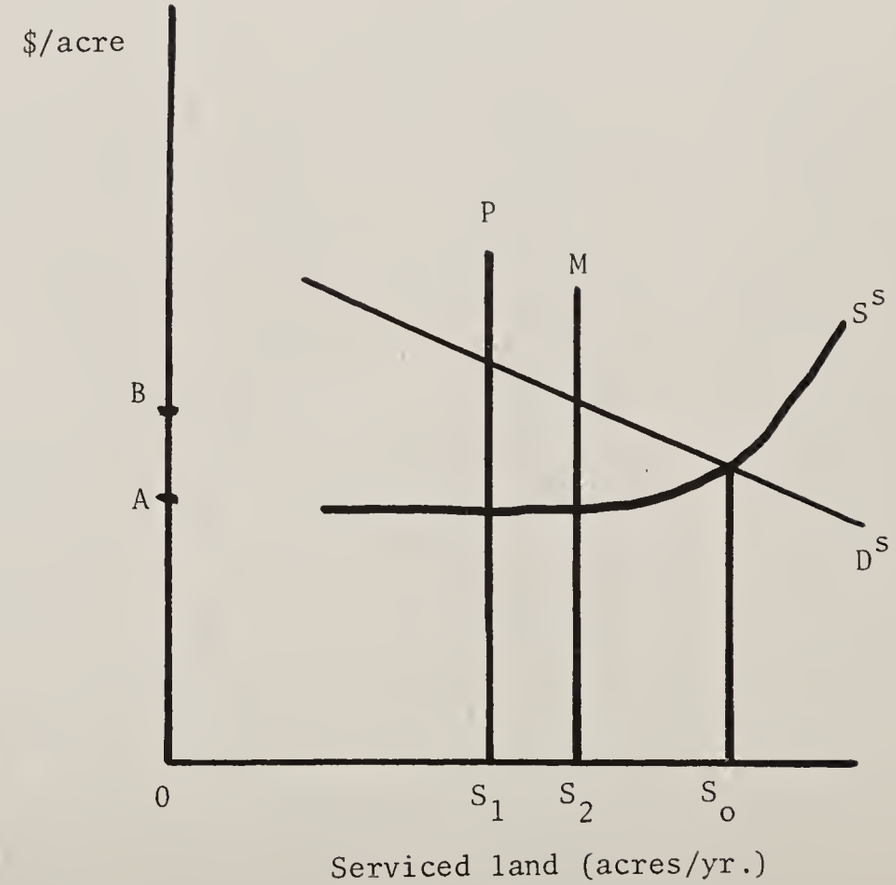
When the finance constraint is binding, changes in federal monetary policy may significantly affect the rate of housing construction. Smith's results imply that a reduction of one percentage point in the spread between mortgage interest and average bond yields would reduce single family housing starts across Canada by more than 5,000 units, or in excess of 7 percent of the yearly flow during his data period.

The second constraint operates in the market for serviced land (Figure 7(b)). In times of very high house prices and consequent high demand for serviced lots, the rate at which developers apply for planning approvals may exceed the rate at which these applications may be processed. Accordingly, serviced land output may be reduced to S_1 from S_0, the unconstrained output level. Of course, the planning constraint may

FIGURE 7: SUPPLY CONSTRAINTS IN THE HOUSING MARKET



(a)



(b)

cease to be binding if demand shifts leftwards.

The effect of a supply constraint is to reduce the rate at which the stock market for housing can return to the equilibrium price level after an increase in demand. So long as the rate of growth in demand exceeds the constrained rate of increase in the housing stock, prices continue to rise.

4. Market Power

An alternative source of constraints in the supply of new housing is the possible presence of market power in the flow markets for housing and serviced lots. In the former case, a perfectly collusive group of builders could restrict the rate of new house production in the expectation of forcing a gradual rise in the price level. In the latter case, land developers might individually or as a group perceive that the market demand for serviced land was negatively sloped. In both cases, the cartel of builders or developers would restrict the total output of new dwellings. The presence of a large stock of existing houses reduces the market power of a cartel of all housebuilders. It can be shown that for a cartel consisting of all housebuilders producing q units annually, the price which maximizes profit in any given year is given by

$$p = c\left[\frac{\eta}{\eta+\beta}\right] \qquad ; \eta < -1,\ 0 < \beta < 1$$

where η is the elasticity of stock demand, c is marginal cost and β is the ratio of the cartel's production to the final stock. The cartel output is implicitly defined by this equation and the stock demand function, but it is not easily expressed algebraically. If the ratio of competitive output to stock is 5%, and price elasticity is -0.3, the price must be less than 20% above the competitive price. For a stock price elasticity of -1.0 the corresponding upper limit is 5%. These are upper limits because as output is restricted, both marginal cost and β fall. If the cartel were to restrict flow output by 50%, the spread between price and marginal cost would be reduced to 9% in the inelastic case.[2]

[2] See Appendix B for derivation of the algebraic results.

A second source of market power is the presence of a downward sloping demand curve for serviced land. If any developer were large enough to account for a substantial fraction of total serviced land sales, it would be profitable for him to restrict output until the marginal revenue derived from land sales equalled their marginal cost to the developer. The net result of such restrictions would be a reduction in serviced land sales from (say) S_o to S_2 in Figure 7(b). It is clear that under some conditions of high demand the restriction due to market power (M) may be dominated by the planning constraint (P), while under other circumstances the monopoly constraint might be binding.

If a restriction on serviced land sales is present, the immediate impact on house price will be slight. However, as in the other cases, house prices will tend to rise over time as the result of the restriction of the rate of growth of the housing stock. In addition, if the restriction is permanently binding, the long-run equilibrium price in the housing market will rise since the price of serviced land will be permanently held above minimum average development cost.

Complications

The above discussion has assumed that all dwellings are homogeneous goods, the demand for and supply of which can easily be obtained by aggregation. If this assumption is modified, it appears that the scope for the exercise of market power is increased. Similarly, the discussion of section D assumed that the functions of land development and building were carried out independently. Integration of the two functions might affect the market power of the integrated firms. The cases of product differentiation and integration are discussed below.

1. Product Differentiation

If the assumption of homogeneity used in the previous section is dropped, individual builders become monopolistic competitors and each will face a downward sloping demand curve

of finite elasticity. This in turn implies that each builder can exercise some control over the price of his product and that the relative deviation of price from marginal cost will vary inversely with the elasticity of demand. This in turn implies that the more inelastic the demand for the individual builder's product the lower will be his rate of production.

The elasticity of demand facing an individual producer of new housing depends on the availability of close substitutes for his product. Although the technical characteristics of any dwelling produced by any builder, for example, the number, size and function of rooms, can usually be reproduced by any other builder, the location of a dwelling is unique. This suggests that the spatial differentiation of a builder's product may be the most important factor governing the price elasticity of his demand curve.

The concentration of land holdings in any subregion of a metropolitan market will tend to decrease the elasticity of demand for new housing facing the landowner. Although the holder of a large land assembly incurs substantial costs in holding land for future development, other developers are effectively precluded from entry in the immediate vicinity of his current construction sites. This reduces the supply of close substitutes for the first developer's product and consequently reduces the elasticity of demand for his own product. As a result, an increase in the concentration of land holdings in regional submarkets could lead to a reduction in the rate of output of new housing and a future housing stock which is less at every point in time relative to what it would have been. Thus, the presence of large regional land assemblies may tend to raise the price of housing over time.

2. Integration

The market for new housing is closely linked to several other markets and some firms operate in more than one of these. Of particular interest are the markets for serviced land, an important input into building and for non-residential development, especially the development of shopping centres and other services to new residential communities. One is then

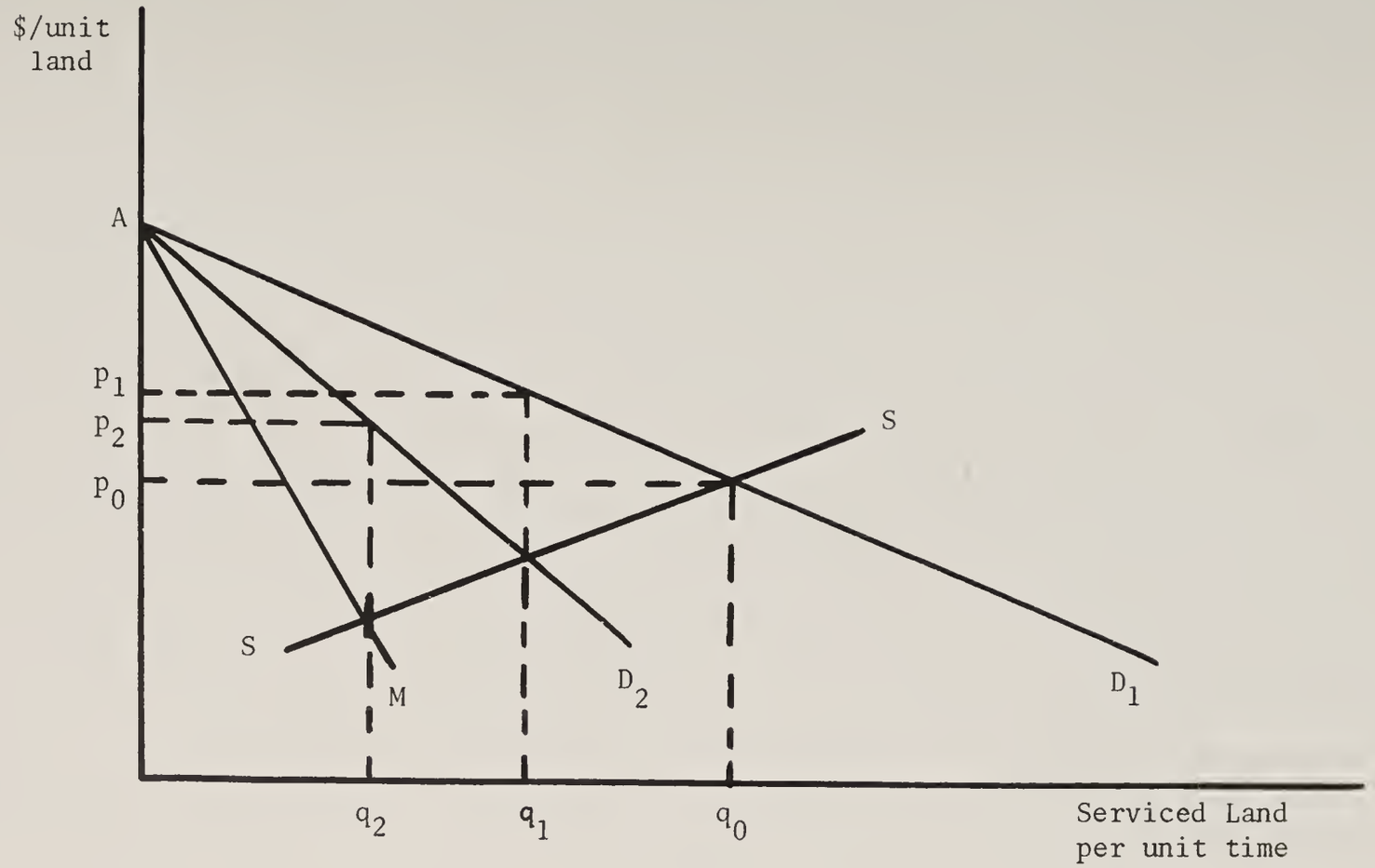
led to ask whether integration of a firm's activities across market boundaries can increase the firm's market power.

Consider first the integration of land development and residential construction. The output of land development is serviced land, an input into the production of new housing. If all dwellings and all serviced land are homogeneous and builders are price takers in the new housing market, the derived demand for serviced land will be AD_1 in Figure 8. The height of the curve measures the value of the marginal product of serviced land when used to produce new housing. If serviced land is competitively supplied, price and output will be p_o and q_o respectively and the marginal social valuation of serviced land (as measured by its price) will equal the marginal cost of producing it. If the remaining inputs into the production of housing are also competitively supplied, the price of new housing will also equal both its marginal valuation and marginal cost.

If land development is cartelized, or if land is sufficiently spatially differentiated as to imply a downward sloping demand for the product of an individual land owner, the marginal revenue product of land will fall below the value of its marginal product. Curve AD_2 represents the marginal revenue curve facing a cartelized land development industry. A profit maximizing cartel will reduce the output of serviced land so as to equate marginal revenue product and marginal cost, the latter, of course, being indicated by the competitive supply curve SS. The new price, p_1, exceeds the old.

The price-output combination (p_1, q_1) is a profit maximizing one for the building and land development industry taken as a whole, since the marginal revenue from the production of new housing is precisely equal to the marginal cost incurred. Moreover, since builders are assumed to be price takers in factor and product markets, the price of houses equals their marginal cost to the builder and all monopoly profit accrues to the land developer. This is an instance of a familiar proposition that vertical integration into a competitive market is not profitable.

FIGURE 8: INTEGRATION IN THE MARKET FOR SERVICED LAND



The picture is altered if competition in house production is imperfect. In that case, the builder's marginal revenue product curve, AD_2, becomes the demand curve facing the cartel of landowners and the new marginal revenue curve is AM. The maximum profit output for landowners is now q_2 with corresponding price p_2. If the builders attempt to exercise monopsony power, the outcome is indeterminate.

In the determinate case, the marginal cost of serviced land is less than its true marginal revenue product and, hence, the joint profits of builders and developers could be increased by the provision of more serviced land. This is the well known result that the vertical integration of bilateral monopolists may increase output and reduce price (Machlup and Taber, 1960). In the context of the land market, this conclusion implies that when a land developer can rely on price-taking behaviour by builders, he may choose not to integrate, but that when builders are few in number and when they may produce differentiated products, developers will generally choose to build on their own land. It is important to recognize that vertical integration of this sort will increase the flow of new housing and reduce the price of housing over time. Thus, vertical integration to avoid market imperfections should not be interpreted as a signal of poor performance. Of course, it might be still better to eliminate the market imperfection in the first place.

The second market with which the new housing market is linked is the market for commercial and industrial buildings in newly developed areas. In particular, new residential communities of any size will normally generate a demand for local shopping facilities, and the presence of nearby employment opportunities may increase the demand for housing in a particular area. Moreover, raw land may be developed for any of residential, commercial or industrial use. When the demand for residential land depends positively on the amount of commercial land sold and vice versa, profit maximization by any landowning firm will normally lead it to combine residential and commercial development in a given land assembly unless there are serious cost disadvantages to doing so.

Integration by the development firm into non-residential building would increase the demand for housing in a particular area. Moreover, raw land usually may be developed for any mixture of residential, commercial or industrial use. When the demand for residential land depends positively on the amount of commercial land sold and vice versa, profit maximization by the landowner will normally lead to the allocation of some land to each use.

In principle, a developer need not undertake the commercial development himself. He could sell the land to commercial developers at a price reflecting its value to the highest bidder. This bid price may be less than the value of the land to the original developer for two reasons: the developer has better information about the nature and timing of the residential development and the purchaser has the alternative of purchasing less suitable but still useful land nearby. As emphasized by Eaton and Lipsey (1976), the construction of a shopping centre in one location may effectively block the construction of others nearby, for the latter would overcrowd the market. The residential developer cannot hope to extract more than the value of the alternative site from the bidders and if the alternative site is developed first, the residential developer suffers a capital loss. Accordingly, it often will be profitable for him to develop the commercial land himself.

The implications of integration of this type for the performance of the housing market are unclear. On the one hand the premium paid for dwellings in residential developments with planned commercial development reflects the valuation placed on the commercial development by the residential purchaser. In addition, there may be significant social cost savings arising from the ability to co-ordinate commercial and residential development. On the other hand, the pursuit of such economies of large-scale mixed development may encourage local concentrations of land holdings, as discussed above.[3]

[3] In addition to encouraging local concentrations of land holdings, the presence of economies of integration may encourage the growth of large scale diversified development firms. The ramifications of this are intriguing, but have not been discussed for lack of information.

Summary

Although the layman readily accepts the proposition that land developers and builders have power in the housing market, to one trained in economic theory the large stock-flow ratio in the market suggests that market power in the provision of new housing may not be very significant. Analysis of a simple stock-flow model indicates that any restrictions in the supply of new housing will initially have but a small effect on the price of housing, but that the effect may become substantial over a period of a few years.

Closer examination of the issues indicates that, even when competitive output is as little as five percent of stock, a complete cartel of housebuilders could raise house prices substantially within a year. More importantly, the presence of large regional land assemblies may lead developers to choose a lower rate of development than they would otherwise. This tendency will tend to raise house prices over the long term.

Realization of the gains from spatial differentiation need not require vertical integration by developers into residential building. There exist pecuniary economies of joint residential and non-residential development which encourage the integrated development of larger communities. This may lead to higher concentration levels and lower rates of output.

CHAPTER 3

INPUT MARKETS

Introduction

The major inputs into the production of new housing are raw land, planning approvals, and the building materials and services supplied by construction firms. As noted in Chapter 1, the new housing production process entails two vertically related steps: the development of land and the construction of dwellings. The output of the first stage, zoned and serviced land, is an input into the second.

In this chapter the structure of the major input markets is reviewed. The supply of raw land in the Toronto CMA is discussed and it is concluded that raw land availability is not a serious constraint on development. Some concentration of land ownership is evident with a tendency to particularly high concentration in some sub-regions. Planning approvals are obtained, not through a market, but rather through an administrative process of some complexity. Evidence is presented to suggest that the average length of time required for final approval of subdivision applications lengthened somewhat over the period 1973-1975, and that large firms had no clear advantage over smaller ones in obtaining approvals. Finally, the market of construction services for residential building appears to be atomistically competitive with some evidence of attempted monopolization through labour union activity.

The Supply of Land

1. Consumption Rates:

Since the boundaries of any geographic region are fixed, the total land area within it is necessarily a fixed and non-augmentable stock. It is thus natural to enquire whether the stock is large relative to the use to be made of it. There is a popular impression that the supply of land in the Metropolitan Toronto Area is very limited and thus that measures to economize on its use must be undertaken. Any effort to confirm this

impression, however, demonstrates the imprecise nature of the concept of a fixed stock of land. The supply of land, in the context of the market for new housing, may be interpreted in at least four different ways: as the total land area of a particular geographic region; as the area of land within this total which may eventually be utilized for residential development, as opposed to industrial, commercial or other use; as the land on which residential development may eventually be permitted by zoning by-laws; and, finally, as the amount of land presently zoned or otherwise designated for residential development and available for building.

All of the definitions of land stock except the first reflect decisions made by developers as constrained by the market and by various housing regulations. All are more easily interpreted in the light of data on current land consumption rates. Tables 9 and 10 provide some relevant information.

Between 1963 and 1971 mean population densities in Metropolitan Toronto were about 28 persons per acre designated for residential development, with a range from 10-14 persons per acre in distant suburbs to more than 80 in the downtown core. Thus, in judging the potential for future development a density of between 25 and 30 persons per acre is reasonable. Over the period 1958-1971 residential land consumption in Metropolitan Toronto proceeded at a rate of about 1,100 acres per year. This must represent a very substantial proportion of total residential development in the Toronto CMA. Total land use consumption in the same period was about 2,200 acres per year and one forecast of land consumption for the entire COLUC area over the period 1971-86 is 2,330 acres per year (Clayton Research Associates (1974), Table E-7). Thus, land consumption rates somewhat below 2,000 acres per year would seem appropriate for the next fifteen years in the Toronto CMA.

2. Stock of Vacant Land

With these figures in mind, it is clear that there is no absolute shortage of land in the Toronto CMA. Reliable land use data are available for the Metropolitan Toronto area and

TABLE 9: POPULATION DENSITIES, METROPOLITAN TORONTO

Year	Mean Density[a] (persons per acre)	Range[b] (persons per acre)
1963	27.7	10.3-80.7
1966	27.8	11.4-81.8
1971	28.4	13.5-83.0

[a]Population divided by developed, designated residential acres.

[b]Range for 16 Planning Districts. The low density is for Scarborough east of Highland Creek and south of Sheppard Ave. The high density is for the downtown core.

Source: Metropolitan Toronto Planning Department (1974).

TABLE 10: RATE OF LAND CONSUMPTION, SELECTED PERIODS

Region	Period	Total Use (Acres)	Annual Average (Acres/yr.)
Metropolitan Toronto, Residential Use	1958-71[a]	14,595	1,123
Metropolitan Toronto, All Uses	1958-71[a]	28,221	2,171
COLUC Study Area, Residential Use	1971-86[b]	34,950	2,330

[a]Metropolitan Toronto Planning Board, Preliminary Impressions, Table 30.

[b]Clayton Research Associates, "Future Housing and Residential Land Requirements in the COLUC Area", Table E-7.

nearby municipalities. Table 11 shows that of 461,367 acres in Metro Toronto and fringe, only 196,494 were developed, leaving

TABLE 11: ESTIMATED GROSS STOCK OF LAND, TORONTO CMA,1971

Area	Total Area (acres)	Built-up Area (acres)	Zone 1 Area (acres)
Metropolitan Toronto[a]	154,680	124,651	154,680
Fringe[a,b]	306,687	71,843	306,687
Remainder of CMA[c]	456,894	41,444	103,276
Total	918,261	237,943	564,653

[a]Metropolitan Toronto Planning Board, Preliminary Impressions, Table 31.

[b]The fringe is coterminous with the former Metropolitan Toronto Planning Area and includes the 1971 municipalities of Ajax, Pickering Twp., Pickering Village, part of Richmond Hill, Markham, Vaughan, Toronto Gore, Streetsville, Mississauga and Port Credit.

[c]Total Area from Ministry of Transport (1973). Built-up area estimated by assuming built-up proportions of 50% for Newmarket, 30% for Aurora and Oakville, and 10% for northern Richmond Hill. Zone 1 area estimated as one-third of former Brampton plus Chinguacousy plus 30% of Oakville.

264,873 acres of vacant land. Crude estimates of development of the remaining land indicate that there are between 600,000 and 700,000 acres of vacant land in the Toronto CMA. This would allow construction of almost five cities the size of Metropolitan Toronto.

Now it is true that not all this land could be devoted to residential purposes, but if the land use pattern of Metropolitan Toronto were repeated more than 300,000 acres would be available for residential development. At densities of 30 persons per acre, a population of 9 million persons could be accommodated. At densities as low as 10 per acre, 3 million could be

accommodated. It seems clear that land availability is not an absolute constraint on urban development.

The allocation of land among competing uses is determined by market decisions of developers and other users, subject to a considerable degree of direct government intervention. The provincial government has the power to reserve some land for special uses, as it has done in reserving land for the Parkway Belt running from Burlington to Toronto, and it can control the large scale development of specific areas by encouraging or discouraging the construction of trunk services such as sewers and water mains. The detailed pattern of development is determined partly by municipal zoning by-laws.

Within the Toronto CMA, substantial areas may be permanently retained as open space, either for agricultural or recreational purposes. Thus, it is seriously misleading to consider the entire land area as available for urban development. While governmental policies are always subject to change, the provincial government has provided some idea of the eventual degree of urbanization contemplated. In a series of discussion papers and Task Force reports an area known as Zone 1 of the Toronto Centred Region has been identified as the area within which future urban growth should be contained.

Zone 1 of the Toronto Centred Region includes urban areas from Hamilton in the west to Oshawa in the east. Within the Toronto CMA, Zone 1 includes most of Oakville, Brampton, Vaughan, Richmond Hill and Markham, as well as all of Mississauga, Metropolitan Toronto and Pickering. Thus, it is roughly equivalent to the former Metropolitan Toronto planning area augmented by Oakville and the new area municipality of Brampton. The total acreage of Zone 1 areas within the Toronto CMA is about 550,000.

If all developed land is subtracted from the Zone 1 total in Table 11, 325,760 acres remain. On the assumption of 60 percent residential use and 10-30 persons per acre, between 2 million and 6 million additional persons could be accommodated in the currently undeveloped area of Zone 1. At consumption rates of 2,000 acres per year, the stock of land in 1971 was

equivalent to 98 years consumption.

Now it is clear that much Zone 1 land is not immediately available for construction. The basic constraints are the availability of trunk water mains and sewers and permission of local authorities to proceed with residential development. A survey of planning authorities in the Toronto CMA undertaken by Coopers and Lybrand (1976) suggests that between 8,600 and 13,300 acres of land within the CMA are designated for residential development under an official plan but not yet zoned for residential development. In addition, some 2,000 acres of land have been zoned for residential use but are not the subject of current applications for subdivision. Thus, no more than 15,000 acres of land are currently available for construction, and much of this land is not yet fully serviced. On the other hand, applications for subdivision totalling about 150,000 units were either in process or approved and this represents about five years annual production. The detailed results of the Coopers-Lybrand survey are reproduced as Appendix C.

Although all the data presented in this section are crude at best, the inescapable conclusion is that the supply of raw land does not provide a technical constraint on new housing production in the Toronto CMA.

3. Concentration in Land Ownership

A large stock of land is no guarantee of a competitive outcome in the land market. As discussed earlier, ownership of large, regionally concentrated blocks of land confers a certain degree of market power on the land developer. The popular impression is that land ownership in the Toronto area is in fact highly concentrated, and that developers accordingly possess a substantial degree of power to influence market outcomes.

This current impression probably arises from the recent studies of Dennis and Fish (1972) and Spurr (1974). Dennis and Fish (p. 324) report CMHC branch office estimates of residential land consumption likely for the period 1971-1980 and the estimated land holdings of the six major developers in the region. For Toronto, these numbers were 19,600 acres and 18,000 acres respectively. The implicit conclusion is that

the largest developers control over 90 percent of future residential land requirements. This approach is clearly misleading, since it ignores all but 1,600 acres held by developers other than the top six. Clearly it is the share of the largest developers in the total developable land in the area which is relevant to the study of concentration.

Spurr attempted to collect information on land holdings and other variables for approximately 60 development companies operating across Canada. He was forced to rely on a wide variety of newspapers and trade magazines as sources of information. Of his firms, twenty-three operated in the Toronto area and he found that the nine largest of his firms accounted for 87% of the land covered in his sample. It should be clear that this is also an inappropriate measure of concentration, since on the one hand, the 41,188 acres held by his firms are a very small fraction of the more than 600,000 acres of undeveloped land in the Toronto CMA, and on the other hand, some of the land included in his sample is well outside the area of active development. It is unfortunate that Spurr's study, which was generally careful to express reservations on the interpretation of data used, has been used as a basis for many assertions that the Toronto land market has been effectively monopolized (Lorimer, 1975a, City Magazine,1975).

The Urban Development Institute, a trade association of developers, conducted a land inventory survey of its members in 1973. This survey has the advantage of being confined to an identifiable geographic region, Zone 1 of the Toronto Centred Region, but was not reported in sufficient detail to develop useful concentration information. It was undertaken in support of the Institute's contention that government restrictions on development and lack of trunk sewers were the main reasons for the perceived shortage of serviced land at the time. The survey identified 47,693 acres of land as 'potentially developable' and indicated that 40 UDI members owned all but about 7,000 of these.

Only 8,171 acres of land were identified as likely to be developed between 1973 and 1977, and it was asserted that the remaining land could not be developed because of government restrictions.

This survey did not report concentration within the group of UDI companies, but even if it had, the concentration information would be of doubtful value without a clearer definition of what constitutes developable land and an indication of the total stock of such land in the defined geographical area.

A study not subject to these criticisms was undertaken by Markusen and Scheffman concurrently with the present study. They selected a sample of 71,600 acres of undeveloped land between 30 and 45 minutes commuting distance of the Toronto core. Only land for which trunk sewers will be available in the next 10 years was included, but otherwise no account was taken of official plans or zoning on the ground that such plans were of uncertain permanence. Within the full sample, a 'restricted sample' which excluded land unlikely to be developed over a ten year time horizon was chosen. For each sample, ownership of all parcels of land exceeding two acres in size was obtained from assessment rolls, and the concentration of land ownership was tabulated. The resultant concentration ratios were termed 'nominal' ownership ratios. 'Effective' ownership concentration ratios were calculated by grouping together firms into complexes, each of which shared at least one common director. Table 12 summarizes the Markusen-Scheffman results.

Markusen and Scheffman stress that ownership concentration is higher in the restricted sample than in the full sample, and higher in the individual municipalities than in the total area. They interpret the former fact as an indication that as the length of time to potential development diminishes, land is traded from individual speculators to larger holding companies, and then to the active developers. They interpret higher regional concentration as evidence of economies of information available to a developer operating in his 'home region'.

It is clear that the Dennis and Fish concentration estimate

TABLE 12: SIX FIRM CONCENTRATION RATIOS IN LAND OWNERSHIP (MARKUSEN-SCHEFFMAN STUDY)

Area	Nominal		Effective	
	Full Sample	Restricted Sample	Full Sample	Restricted Sample
Total Sample	21.4	29.5	30.5	40.1
Brampton	44.4	58.1	51.1	66.6
Markham	32.9	56.3	38.2	62.7
Mississauga	45.6	58.4	49.5	61.9
Pickering (4 firm)	66.8	66.8	66.8	66.8
Richmond Hill	40.5	46.0	43.6	48.8

Source: Markusen and Scheffman (1976).

is quite misleading. Even in the restricted sample of areas judged most likely to be developed in the near future, the six largest firms controlled only 40.1 percent of vacant land. A concentration ratio of this magnitude would be considered below average in manufacturing industries,[1] but it not safe to directly compare land markets with industrial markets. As was noted in Chapter 2, market power in land development would be exercised primarily through a reduction in the rate of land development rather than an increase in current period prices. Regional concentration in Brampton, Markham, Mississauga and Pickering seems high enough to conclude that less than competitive rates of development may occur, although there is no evidence available on the relationship between the two variables.

In brief, land ownership is far less concentrated than popular belief has it, but it is equally far from being unconcentrated, particularly in subregional markets.

[1] In 1968, 100 of 187 industry classifications in mining, logging and manufacturing had national four firm concentration ratios in excess of 50%. Statistics Canada (31-514).

The Supply of Planning Approvals

1. Description

The Ontario Planning Act[2] gives the province and municipalities wide powers to regulate the division of land and the uses to which it is put. In particular, sections 29 and 33 provide that no parcel of land may be divided into building sites ('lots') except by a registered plan of subdivision or by the consent of an approved municipal body, and section 35 allows municipalities comprehensive powers to enact zoning by-laws which regulate land use and specify in detail the type and size of residential buildings and lots. The rates at which raw land may be converted to residential use and at which land may be redeveloped for higher density residential construction are thus controlled by provincial and municipal planning authorities. Consequently the approval of these agencies is a necessary input into the production of new housing. The gross revenue received by a developer for his land is determined by the use to which the land may be put, and hence the value of the approval to the builder is very large. It is to be expected that developers will devote substantial resources to obtaining approvals.

In briefest outline, the Planning Act envisages the creation of planning areas, consisting of one more municipalities, for which a planning board is to be appointed.[3] The planning board is to prepare an official plan for the community, which sets out broad plans for development, designates areas of current and future development, and indicates services to be provided by the municipality. The official plan is to be approved by the relevant municipalities and the Minister of Housing or the Ontario Municipal Board. Once official plans

[2] R.S.O., Ch. 349 as amended by 1971, Ch.2; 1972, Ch. 118 and 1973, Ch. 168.

[3] The development and state of planning in Ontario is thoroughly discussed in Subject to Approval (Ontario Economic Council, 1973), upon which the following summary is based.

have been approved, all actions by local councils and boards must be in conformity with the plan.

Whether or not an official plan is in existence, the division of land into smaller parcels can proceed only by way of a registered plan of subdivision or consent of a municipal body. A plan of subdivision is a map and supporting documentation specifying the layout of streets, building lots and public places, the plans for municipal services for the subdivision and details of the contour and natural features of the land. It may also specify restrictions on the design or use of buildings within the subdivision. A draft plan of subdivision is prepared by the developer and submitted to the Ministry of Housing.[4] The plan is circulated to all relevant municipal and provincial authorities for comment and approval. Changes may be negotiated with or imposed upon the developer, and the developer may enter into formal subdivision agreements with the municipality, whereby the developer undertakes to provide and maintain various services or facilities within the subdivision.

The subdivision plan first receives draft approval by the Ministry of Housing, after which the developer may proceed to install streets and services. When all relevant conditions have been fulfilled, the plan receives final approval, and the individual building lots may be registered. Upon registration, the lots may be sold to builders and the municipality may grant a building permit.

The Planning Act also provides for the division of land by the consent of a local committee of adjustment or land division committee. The granting of consents is of great importance in the creation of ribbon development along highways in rural areas, but is not prevalent in the Toronto region. (Ontario Economic Council, 1973, p. 60). Consents are not normally granted for more than two or three parcels

[4] As noted below, since July 1, 1975, the power to approve subdivision has been delegated to the councils of regional municipalities and of Metropolitan Toronto.

at a time, and since the beginning of 1974 can only be granted in conformity with an official plan.

The Planning Act also empowers municipal councils to pass zoning bylaws, which can specify in minute detail the floor area, density, lot size and purpose of all new structures within a particular area. Zoning by-laws are intended primarily for the preservation of the specific character of certain neighbourhoods, thus protecting residents from capital losses which might be suffered by the conversion of land surrounding their property to higher density or non-residential use. Municipal councils also use zoning by-laws as devices to extract agreements as to the nature of new construction from potential developers. (Ontario Economic Council, 1973, p. 76). Thus the construction of new high density residential buildings will normally require the amendment of the local zoning by-laws and this will be forthcoming if the proposed building is sufficiently attractive to the council.

The administration of the Planning Act has been modified by the development of regional government in the Toronto area and of metropolitan government in Toronto itself. Planning areas are coterminous with regional boundaries, and regional councils act as their own planning boards. Within each region, area municipalities or boroughs constitute subsidiary planning areas and the municipal councils have the responsibilities formerly assigned to the local planning board. Since June 30, 1975, the power of the Minister of Housing to approve subdivision has been delegated to the regional councils. All regions and the municipality of Metropolitan Toronto are in the process of preparing official plans, with which all subsidiary official plans must be made consistent.

A number of studies have suggested that delays and restrictions in the planning process have resulted in a very inelastic supply of serviced lots, and hence have contributed to the rapid rise in the price of serviced lots experienced

over the period 1970-1974.[5] Criticism has been of four main characteristics of the planning process: bureaucratic inertia, municipal financial disincentives, conflicting provincial initiatives, and the ease with which citizen groups can delay the granting of planning approvals.

Approval of a new residential development may require an amendment to the official plan of the municipality, passage of a zoning by-law and approval of a plan of subdivision. In accomplishing these steps, plans for the new development are circulated to a very large number of local, regional, provincial and federal agencies (UDI, 1973, Figure 8). Most of these agencies (for example, the provincial Ministry of the Environment and local conservation authorities) are not primarily concerned with the provision of housing. Hence, there is a strong tendency to delay or modify a subdivision proposal if it conflicts with the interests of the department. The result has been characterized as "a system of all checks and no balances" (UDI, 1973, p. 14). The creation of a Ministry of Housing (as recommended by the Comay Commission) appears to have been partly an attempt to create a bureau with a specific interest in the promotion of housing.

A second problem relates to the financial disincentives to the production of new housing facing a municipality. Municipalities are responsible for the provision of education, police and fire protection, social services, public transportation and many other services to their residents. The major source of municipal revenue is property taxation. Since raising taxes carries a significant political cost to councillors, there is a strong tendency to approve residential development only when the cost of servicing the new residents will be low (as is typically the case of high density apartment dwellers), or when the incremental property tax revenues will

[5]For example, the Comay Commission (Ontario Advisory Task Force on Housing Policy, 1973, pp. 2, 37-46); the Ontario Economic Council (1973) especially Ch. 10, 16; the Urban Development Institute (1972) and Derkowski (1975).

be high (as is the case with higher priced single family dwellings). It is suggested that this may be the reason why many municipalities have very large minimum frontage, floor area and other requirements for new single-detached dwellings (Comay, 1973, p. 40). Moreover, since municipalities are eventually required to maintain piped water and sewage services and local roadways, there is a strong incentive to insist on very high standards for the services installed by developers. As a result, future maintenance charges are capitalized into the price of the house, and the nominal purchase price is higher. (Cf. Comay, 1973, pp. 44-45).

The supply of development approval is also alleged to have been restricted by the provincial government's neglect of the impact on housing of its regional government and environmental policies. (Comay, 1973, pp. 39, 44). Since no new developments are allowed to use septic tanks, new residential housing is constrained by the availability of piped water and sewage treatment facilities. The Ministry of the Environment is committed to the provision of piped services based on major pumping and treatment stations on Lake Ontario. Least cost provision of these services appears to involve working gradually northward from the lake, with a consequent delay in the servicing of more remote land (Ontario, COLUC Task Force, 1975, p. 30). The creation of regional government in Durham, Peel, York and Halton may also have significantly delayed the approval of subdivision plans. In the case of at least one development in Peel Region, a subdivision agreement had to be completely renegotiated with the new area municipality. The Comay commission expressed concern that uncertainties about regional policies were hampering developers' plans (p. 39).

Finally, the fact that contested zoning by-laws must be referred to the Ontario Municipal Board for a hearing means that opposition to new development by local ratepayers can significantly lengthen the duration of a subdivision application. Derkowski (1975, p. 164), argues that public participation in planning is largely confined to those with a vested interest in restricting rather than promoting the

growth of the housing stock, and, hence, their ability to delay proceedings is another unjustified restriction on the flow supply of serviced land.

2. Duration of Subdivision Applications

Some evidence on the importance of delays in the approval process may be obtained from the records of the Plans Administration Branch of the Ministry of Housing. From these records details of all plans of subdivision within the Toronto CMA for which lots were registered between January 1, 1973, and June 30, 1975, were extracted and tabulated for the purposes of this study. The records contain the dates of application, draft approval and final approval for each plan and the date on which lots were registered. The size of the subdivision plan can be measured by the number of building lots registered. In principle, only lots for construction of semi-detached or single-detached houses are reported. Some adjustments to the original data were necessary to correct obvious errors, and these are discussed in Appendix D. Despite their limitations, the data provide important information on the size and duration of subdivision applications and on concentration in land development.

Table 13 reports the mean time elapsed between initial application and registration of lots for the original sample. For this sample, the average duration of application was 732 days (approximately 24 months). This average conceals a great range (up to 60 months) as shown by the standard deviation of 415 days. There appears to be an upward trend in the length of time to registration, from 678 days (22 months) in 1973 to 856 days (28 months) in 1975, but the difference in duration is not statistically significant. Moreover, larger durations may reflect the slower market conditions experienced in the latter part of 1974 and 1975. Under these circumstances developers might not have proceeded with registration as quickly as was the case earlier. The data to test this possibility are available in the Ministry's records, but were not collected for this sample.

TABLE 13: MEAN DURATION OF APPLICATION FOR CONDOMINIUM UNITS AND SUBDIVISON LOTS REGISTERED, 1973-75

Item	1973	1974	1975 (1st half)	1973-1975
Condominium Townhouses				
Number of Applications	30	70	26	126
Number of Units	2332	5548	1498	9878
Duration of Application (days)	391	401	402	399
Standard Deviation (days)	198	176	121	171
Condominium Apartments				
Number of Applications	12	19	11	42
Number of Units	2626	3420	1654	7700
Duration of Application (days)	589	523	423	516
Standard Deviation (days)	181	238	210	220
Subdivision Lots Registered				
Number of Applications	102	78	34	214
Number of lots	8956	7345	2933	18734
Duration of Application[a] (days)	678	748	856	732
Standard Deviation (days)	416	424	325	409

[a] An F-test cannot reject the hypothesis of no change in mean duration over time at the .05 level of significance.

Source: Computed from Subdivision data described in Appendix D.

When a multiple dwelling is to be held in condominium tenure, registration under the Condominium Act is required. The developer applies to the Ministry of Housing for approval, upon which a condominium corporation is established to manage the common elements of the property on behalf of the owner of the individual units. If the condominium development is located in a new subdivision, it will be reviewed through the normal subdivision approval procedure, but no lots will be registered. Instead, the condominium corporation itself is registered, together with all the dwelling units included in it.

A study of applications for registration under the Condominium Act provides information on the length of time between application and registration of condominium agreements. Table 13 indicates that the mean duration of application was 399 days (13 months) for condominium townhouses and 516 days (17 months) for condominium apartments. There is an apparent trend to shorter durations.

Although not conclusive, these data clearly indicate substantial delays in the process of subdivision of land for new housing. Delays of upwards of two years are certainly incongruous with expressed desires by municipal officials to reduce to ninety days the gap between application and draft approval. The result is that the planning constraint discussed in the previous chapter may have been operative during the 1973-74 period. The predicted consequences, namely, a slower adjustment to long-run equilibrium and a rapid rate of price increase, are consistent with observed events in the market during that period.

3. Economies of Scale in Planning

Since planning approvals are so important to the success of a residential development, any advantages of large firms in obtaining approvals will encourage the growth of these firms and a consequent increase in market concentration. The data on subdivision applications provide some guidance in identifying economies of scale in planning and obtaining planning approvals.

The grounds for expecting economies of scale in planning are two: internalization of externalities and reduction of negotiation costs. If a developer can plan on a sufficiently large scale to guarantee adequate commercial and recreational facilities to potential buyers and to provide them with some indication of the future development plans for the community, he may realize a higher price on the sale of his land or the buildings erected on it. The clearest example of large scale planning of this nature is Cadillac-Fairview's Erin Mills development on 8,000 acres of land in Mississauga. This development contains residential, commercial and industrial areas, with residential development proceeding by the sequential planning of neighbourhoods, each covered by a separate plan of subdivision.

A second advantage accruing to planning on this scale is the reduction of negotiation costs. Within any residential area, certain land must be dedicated for institutional and recreational use. The revenue received on the sale of this land will normally be lower than the revenue on land sold for residential development, although in dedicating this land the developer may be increasing aggregate market value of all land in the project. If ownership of the land is split into small parcels, each owner will wish to avoid having his land designated for these lower valued purposes, and negotiation among owners will be required. Thus development at the scale of a community (several subdivisions plus associated commercial, recreational and other facilities) may be less expensive per lot than development at a smaller scale.

The importance of economies of scale in planning would best be examined by using actual costs incurred in the planning of a number of developments. In the absence of such detailed information, some weak indication may be gained from the distribution of building lot registrations by size of firm and by size of subdivision plan.

If there are substantial potential economies of scale in planning, or in any other function for that matter, one would expect to observe a large fraction of all building lots

being registered by large firms able to realize these economies. Even more, one would expect 'surviving firms' to demonstrate a gradual adjustment in size to 'optimal scale' (Stigler, 1958). If the economies of scale are to be found within the plan of subdivision, one would expect the distribution of building lots by size of subdivision plan to show an increasing preponderance of very large plans. If the economies giving rise to large firms are not connected with the subdivision process, one would expect to observe large firms registering many plans of subdivision, that is, large subdivisions should be less frequent than large firms.

Table 14 breaks down lot registration by size category of the firm, as measured by the number of lots registered by the firm over the period from January 1, 1973 to June 30, 1975. It will be seen that more than half of all building lots were registered by firms which produced more than 400 lots in the 30 month period (a rate of 160 lots per year). Almost one-quarter were registered by firms which produced more than 1,600 lots each (640 lots per year). The fact that large firms have such a substantial share of the market suggests that they may enjoy some economies of scale, but does not shed any light on the possible source of such economies.

Table 15 shows the distribution of building lot registration by size of plan. It is evident that about 70 percent of all building lots are registered in plans of subdivision of between 100 and 800 lots, suggesting that economies of scale in subdivision planning are exhausted at a scale of a few hundred units. This relatively small scale of subdivision is consistent with the hypothesis that, if present, economies of scale in planning are connected with reduced negotiation costs and expanded integration opportunities experienced when developing land at scales larger than the single subdivision.

It appears that the duration of application for large plans of subdivision is at least as great as that for smaller plans. (Table 16). However, there is a slight indication that the larger firms may have a slight advantage in the speed with which a subdivision application is processed. Table 17

TABLE 14: BUILDING LOTS REGISTERED BY SIZE OF FIRM, BY YEAR

Size of Firm[a]	Year of Registration				Percentage of all lots
	1973	1974	1975 (1st half)	1973-75	
1-25	530	403	130	1,063	5.6
26-50	631	346	345	1,322	7.1
51-100	602	186	117	905	4.8
101-200	1,334	1,254	383	2,971	15.9
201-400	1,964	621	237	2,822	15.1
401-800	583	2,038	0	2,621	14.0
801-1,600	921	1,392	276	2,589	13.8
1601+	1,891	1,105	1,445	4,441	23.7
Total	8,456	7,345	3,744	18,734	100.0

Source: See text.

[a]Total number of lots registered in 30-month period.

TABLE 15: BUILDING LOTS REGISTERED BY SIZE OF PLAN, BY YEAR

Size of Plan (Building Lots)	Year of Registration				Percentage of All Lots
	1973	1974	1975 (1st half)	1973-75	
1-25 lots	588	457	221	1,266	6.8
26-50	866	389	305	1,560	8.3
51-100	810	358	179	1,347	7.2
101-200	1,531	2,357	282	4,170	22.3
201-400	2,739	2,341	750	5,830	31.1
401-800	1,922	1,443	0	3,365	18.0
801+	0	0	1,196	1,196	6.4
All Plans lots	8,456	7,345	2,933	18,734	100.0

Source: See text.

TABLE 16: DURATION OF APPLICATION, BUILDING LOTS BY SIZE OF PLAN, 1973-1975

Size of Plan (units registered)	Mean Number of Days from Application to Registration			
	Year of Registration			
	1973	1974	1975 (1st half)	1973-75
1-25	722	716	766	727
26-50	622	804	786	697
51-100	733	622	1,239	787
101-200	729	850	1,252	831
201-400	487	594	901	587
401-800	777	1,066	0	901
801+	0	-	824	824
All Plans	578	748	854	732
Standard Deviation	416	424	325	409
Number of Plans	102	78	34	214

Source: See text.

TABLE 17: DURATION OF APPLICATION, BUILDING LOTS BY SIZE OF FIRM, 1973-1975

Size of Firm (units registered)	Mean Number of Days from Application to Registration			
	Year of Registration			
	1973	1974	1975 (1st half)	1973-75
1-25	706	760	804	740
26-50	677	815	714	714
51-100	748	793	1,357	852
101-200	637	826	1,147	778
201-400	501	633	1,058	603
401-800	960	865	0	896
801-1,600	452	545	710	529
1,601-3,200	766	523	811	706
All Firms	678	748	857	732
Standard Deviation	416	424	325	409

Source: See text.

shows that firms in most size classes between 200 and 3,200 lots had shorter than average duration of application, while most of the remaining size classes showed greater than average duration.[6] That smaller firms should not be at a great disadvantage in securing subdivision approvals is perhaps to be expected. Since there are a substantial number of firms of professional town planners who act as agents for many developers, the service of planning and expediting subdivision approvals may be purchased at a small scale in a reasonably competitive market.

The Supply of Construction Services

1. Market Structure

The production of new housing requires the services of the construction industry both in the installation of piped services and roadways and in the actual construction of the dwellings. Servicing is contracted out to an engineering firm. This operation may be arranged by the planning consultant. If he builds himself, the developer normally acts as his own general contractor for the residential construction. This is normally the case for high density developments. In the case of lower density developments (single and semi-detached dwellings), the developer often sells lots to an independent builder, who will in turn act as his own general contractor.

Participants in the industry do not express any concern about the availability of servicing at competitive prices. There is very little vertical integration by developers or builders into the provision of civil engineering services. George Wimpey, Ltd. is the only major developer to maintain its own servicing division, and this appears to be a matter of historical accident, given the large general contracting business of the parent company in the United Kingdom. There are no data available to measure the trends in servicing costs, but concern is generally expressed that municipalities impose

[6] The differences in duration by size category are not statistically significant.

excessively high servicing standards on developers. Derkowski estimated that servicing costs amounted to approximately one-third of the 1974 market value of a typical lot in the Toronto area (HUDAC, 1975, p. 10).

Since builders act as their own general contractors, construction services are supplied in the industry by sub-contractors specializing in a wide variety of trades. Considerable insight into supply conditions in the subcontracting trades can be obtained from public investigations. The Waisberg Commission's report[7] provides a vivid picture of active rivalry amongst subcontractors and of attempts by rival unions to gain control over residential construction. Despite several attempts, unionization of single family residential construction has not been successful, but union labour is employed on many apartment projects.

In the construction industry, unions act as employment agents. In this role they are often able to promote cartelization of a particular building trade. For example, the vice-president in Canada of the Operative Plasterers' and Cement Masons International Association of the United States and Canada and the business manager of Local 48 of that union actively promoted the formation of two contractors' associations for the purpose of allocating contracts and employment. Non-members of the association were harassed by union members and found difficulty in obtaining labour. (Waisberg, p. 9). This particular scheme resulted in a conviction under the Combines Investigation Act.

More generally, however, the picture is one of active competition among contractors punctuated by attempts to cartelize. For example, a forming contractor testified as

[7]Ontario, Royal Commission on Certain Sections of the Building Industry, Toronto, Queen's Printer, 1974. Cited below as Waisberg (1974).

follows:

> "...when you submit a price, it isn't done as you would normally do on a commercial [job] where you submit a sealed tender and it is open and the lower man gets the job. What you do is, there is about three rounds of negotiations to put in the price ... and then he [the developer] would show that to every other forming contractor in town and ask them if they could meet it." (Waisberg (1974), p. 241).

To halt this type of competition, contractors would attempt to "organize" the field. For example, it appears that members of the Metro Lathing Association hired men in 1971 to "regulate the industry" (Waisberg, p. 236). Work was allocated to the various lathing firms and when one lathing company agreed to perform work for a small developer who had been allocated to a different contractor, the job was sabotaged (p. 234). However, these attempts do not appear to have been successful in suppressing competition in the long run.

The general impression, then, is that low barriers to entry and the cost minimizing efforts of developers have led to effectively competitive conditions in the residential building trades, despite vigorous efforts by some to reduce competition.

2. Cost Trends

Residential building costs rose rapidly in the early 1970's. The Toronto Real Estate Board publishes annually a schedule of unit costs for various classes of construction as prepared by a surveying company. These data are given in Table 18, along with the Statistics Canada residential construction price index and the price index for new houses in Toronto. It will be seen that the Toronto Real Estate Board cost index for single-detached housing has risen almost as rapidly as the new house price index, while lagging somewhat behind it. Apartment construction costs have risen approximately in proportion to the Consumer Price Index.

TABLE 18: SELECTED INDICATORS OF RESIDENTIAL CONSTRUCTION COSTS

Date	Single Detached[a]		Apartments[b]		Construction	New House Price Index (Toronto)	Consumer Price Index
	$/ft^2	Index	$/ft^2	Index			
1966	13.00	77.4	12.75	87.9	70.0		83.5
1967	13.80	82.1	13.00	89.7	74.6		86.5
1968	15.50	92.3	13.00	89.7	79.8		90.0
1969	16.00	95.2	13.50	92.1	85.1		94.1
1970	16.80	100.0	14.50	100.0	91.1		97.2
1971	16.80	100.0	14.50	100.0	100.0	100.0	100.0
1972	17.50	104.2	14.75	101.7	110.1	110.2	104.8
1973	19.75	117.6	15.70	108.8	123.2	137.6	112.7
1974	25.00	148.8	18.70	129.0	134.7	171.6	125.0
1975	27.50	163.7	20.20	139.3	146.7[c]	172.7[c]	138.5

[a]Single storey, brick, superior quality with garage. Data refer to January 1 of this year.

[b]Apartments, 10-30 storeys. Data refer to January 1.

[c]July, 1975

Sources: Toronto Real Estate Board, Schedule of Unit Costs; Statistics Canada, Prices and Price Indexes; Bank of Canada, Review.

3. Economies of Scale in Building

It is generally agreed that there are some economies of scale in building, but little hard evidence is available. Firms large enough to let contracts for two or three hundred units annually may obtain a unit cost reduction of the order of ten percent relative to the builder of fewer than one hundred units per year. Part of the reduction represents a real resource saving: the subcontractor's uncertainty is

reduced and his labour force is more fully employed.

To the extent that the Toronto Real Estate Board's unit cost schedule is an accurate guide, the cost per square foot appears to fall with the scale of the individual structure. Table 19 indicates the construction costs per square foot for duplexes, low rise apartments and higher rise apartments are 80 percent, 78 percent and 68 percent of the comparable costs for a small house.[8] Some of this cost reduction is due to the physical properties of the various types of construction, some may be due to the pecuniary economies of scale discussed earlier. In this connection, R. Ball (1975) found that labour requirements per dwelling unit were substantially lower for apartment units than for single family construction in the USA. Further evidence from U.S. data is provided by B. Stevens (1975) who found small but statistically significant economies for single site construction of multi-family housing. In particular, she estimates the elasticities of price and cost with respect to the number of units produced to be in the range of -0.1 to -0.2 for apartment buildings below 200 units in size.

As in the case of planning approvals, the distribution of dwelling units constructed by firm size provides additional, if weak, evidence on the importance of scale economies in construction. From the sample of building permits described in Appendix D it was possible to compute the distribution of building permits issued to firms of various sizes, as measured by the total number of dwelling units constructed over the period 1973-75. Again following the survivorship principle (Stigler, 1958), one would expect to observe firms of the most efficient scale receiving a growing share of all building permits issued. In the absence of a sufficiently long time period for the analysis of changes, one can only investigate the current distribution of building permits

[8] Note that the house considered in Table 19 is of lower quality than the single-detached house considered in Table 18. Similarly, the apartment descriptions are not comparable between tables.

TABLE 19: COST PER SQUARE FOOT OF ALTERNATIVE STRUCTURES

Type of Structure	Cost per square foot 1975	% of Single
Single detached[a]	23.65	100.0
Duplex	18.90	79.9
Rowhouses	20.80	88.0
Apartments (2-10 stories)	18.35	77.6
Apartments[b] (over 10 stories)	16.00	67.6

[a]Six room house, one bathroom, 1,200 sq. ft., no garage.

[b]Suburban Apartments, 1,000 sq. ft. per suite.

Source: Toronto Real Estate Board, Schedule of Unit Costs, 1975, pp. 13 and 23. See also fn. 8.

by firm size. If a large percentage of dwelling units are built by firms with operations which are large relative to the total market, then it may be concluded that economies of scale in construction may be sufficient to pose a barrier to entry. A preponderance of construction by firms individually accounting for very small market shares would suggest that economies of scale are unimportant as barriers to entry in residential construction.

Table 20 indicates that 60.5 percent of all dwelling units were built by firms that built fewer than 800 dwellings units over the three year period. Each of these firms has a share of less than 0.83 percent of the total market for new dwellings in the Toronto CMA. Thus if economies of scale in construction do exist, they have not enabled large builders to dominate the construction of new housing. The importance of small builders is relatively greater in the production of ground units: 66.9 percent of all ground units were built by firms whose individual

TABLE 20: DISTRIBUTION OF BUILDING PERMITS ISSUED BY SIZE OF FIRM, BY TYPE OF CONSTRUCTION, TORONTO CMA, 1973-75

Size of Firm		Ground Units		Apartments		All Units	
Total Units[a]	Percent of Market	no.	%	no.	%	no.	%
1-25	-0.03	8,096	18.9	469	0.9	8,565	8.8
26-50	0.03-0.05	3,520	8.2	562	1.0	4,082	4.2
51-100	0.05-0.10	4,240	9.9	1,560	2.9	5,800	6.0
101-200	0.10-0.21	5,078	11.9	5,303	9.8	10,381	10.7
201-400	0.21-0.41	5,591	13.1	9,439	17.4	15,030	15.5
401-800	0.41-0.83	2,081	4.9	12,761	23.5	14,842	15.3
801-1600	0.83-1.65	8,493	19.9	12,284	22.6	20,777	21.4
1,601-3,200	1.65-3.30	3,665	8.6	5,216	9.6	8,881	9.2
3,201 +	3.30-	1,971	4.6	6,633	12.2	8,604	8.9
		42,735	100.0	54,277	100.0	96,962	100.0

[a]Total units include all ground and apartment units for which building permits were issued in the years 1973-1975.

totals were less than 800 units and 62.0 percent were built by firms whose totals were less than 400 units.

In apartment construction smaller firms are less evident, but 78.1 percent of all apartments were built by firms whose total construction over the period was less than 1,600 units. The inference is that economies of scale in dwelling unit construction have not been great enough to discourage builders operating at relatively small scales.

Summary

This chapter has discussed the supply conditions of three important inputs into the production of new housing: land, planning approvals and construction services. The absolute supply of land was not considered to be an important constraint on new housing construction, but there was evidence of substantial concentrations of land ownership in some regions. As suggested in Chapter 2, this could lead to reduced rates of production of serviced land. The process of obtaining planning approvals is an extended one, and it was found that the average length of time from date of application for a plan of subdivision to the date of registration of building lots was of the order of two years. Large firms have no clear advantage in the speed with which approvals are granted, nor are there clear indications of economies of scale in planning larger subdivisions. However, firms registering more than 1,600 building lots in a 30-month period were the largest single category of developer and this is consistent with the presence of other economies of scale in land development.

General contracting and subcontracting services appear to be competitively supplied with little evidence of successful collusion or blocking of entry. There is evidence of some economies of scale in residential construction up to the neighbourhood of a few hundred units per year, but the distribution of building permits does suggest that economies of scale in construction are not large relative to the total market in the Toronto CMA.

CHAPTER 4

THE STRUCTURE OF THE NEW HOUSING MARKET

Introduction

This chapter presents some evidence on the structure of the new housing market in the Toronto area. The firms which supply new housing will be the main object of discussion, since the demand side of the market has been discussed in the previous two chapters. The firms operating in the new housing market are of two types: public companies (those offering their shares to the public) and private companies. Much more information is readily available about the former group. The chapter begins by introducing the major public development companies, and then discusses concentration of land ownership, land development and building in the hands of the largest firms. Some comments are then made about integration and barriers to entry. The chapter concludes with a general analysis rationalizing the observed market structure.

The Development Firms

There are ten large public real estate development companies operating in the Toronto area.[1] These are listed in Tables 21 and 22 together with an indication of their land holdings and income properties in the Toronto area.[2] The

[1] These were selected from the 46 real estate development companies analysed by Price, Waterhouse and Co. (1974). Only those companies issuing annual reports describing substantial operations in the Toronto area were included in Table 21. Campeau Corporation was excluded because detailed information on its Harbour Square development was not included in the annual report.

[2] A word of caution in interpreting the data in Table 21 is appropriate. All of the financial data reported are taken from the published annual reports of the companies involved. As such they are not strictly comparable between firms and may be seriously misleading, especially if the major assets of the companies were acquired at different periods. The problems of measuring profit rates are discussed in more detail in Chapter 6 below.

TABLE 21: FINANCIAL DETAILS OF TORONTO AREA PUBLIC LAND DEVELOPMENT COMPANIES, FISCAL YEAR ENDING NEAREST DECEMBER 31, 1974

	Name	Assets ($'000)	Shareholder's Equity ($'000)	Net Income ($'000)	Return on Equity	Ownership	Origin
1.	Abbey Glen[a] Property Corp.	388,539	70,104	9,316	13.3	Capital and Counties Property (UK) (62%)	Merger, 1974
2.	Bramalea Consolidated Developments[b]	164,913	28,839	3,122	10.8	Field and Shiff Families) (75%)	Private Co., 1957
3.	Cadillac-Fairview Corp.[d]	921,175	118,774	13,044	11.0		Merger, 1974
4.	Consolidated Building Corp.[d]	91,755	16,385	4,602	28.1	Bovis Corp. (32.7%)	Merger of Private Builders, 1957
5.	Richard Costain[e] (Canada)	77,451	10,486	2,697	25.7	Richard Costain (Holdings) Ltd. (UK) (49.7%)	1953
6.	Deltan Corp.[e]	333,628	20,428	6,237	30.5	R.J. Prusac (Canadian resident)	1921
7.	Markborough[f] Properties, Ltd.	142,105	38,424	4,283	11.2	Hudson's Bay Co. (64.3%)	Merger, 1965
8.	S.B. McLaughlin[e] Associates, Ltd.	226,756	28,947	2,254	7.8	S.B. McLaughlin (45%)	Private Co., 1957
9.	Monarch Investments, Ltd.[e]	62.632	14,424	2,308	16.0	Taylor Woodrow Holdings, (UK) (42.6%), Standard Life Assurance Co. (28.7%)	
10.	Revenue Properties[e]	92,432	19,860	492	2.5	A. and H. Rubin M. Goldhar (35.9%)	Private Co., 1961

Source: Annual Reports and Financial Post Corporation Service.

[a]March 31, 1975; [b]November 30, 1974; [c]Before extraordinary items; [d]February 28, 1975; [e]December 31, 1974; [f]October 31, 1975.

TABLE 22: OPERATIONS OF MAJOR PUBLIC DEVELOPMENT COMPANIES IN TORONTO AREA, FISCAL YEAR ENDING NEAREST DECEMBER 31, 1974

Name	Declared Unregistered Land Holdings Toronto CMA (acres)	Construction Division	Dwelling Units Constructed Toronto CMA	Rental Units Toronto CMA (operating and under development)	Other Operations
1. Abbey Glen Property Corp.	1,158	yes	n.a.	694	Shopping Centres, Hotels, Commercial Properties and Land Development, Modular Housing Construction, Canada and U.S.
2. Bramalea Consolidated Developments	3,979	yes	493[a] 1,920[c]	940	Shopping Centres, Commercial, Industrial Properties, mainly in Ontario
3. Cadillac-Fairview Corp.	6,496	yes	n.a.	13,534	Shopping Centres, Commercial Development, Canada and U.S.
4. Consolidated Building Corp.	760	yes	1,492[c,d]	>>440	Hotels, Shopping Centre, and Property Management, Ontario
5. Richard Costain	108	yes	117[d]	-	Land Development and Building throughout Ontario
6. Deltan Corp.	n.a.	n.a.	n.a.	n.a.	Condominium and Apartment Developments
7. Markborough Properties	n.a.[e]	no?	-	1,361	Office, Commercial and Industrial Development, Ontario, Saskatchewan and Florida
8. S.B. McLaughlin Associates, Ltd.	4,765	yes	352	-	Commercial and Land Development, Hotels, Recreational Resorts, Ontario, Quebec and B.C.
9. Monarch Investments	749	yes	n.a.	n.a.	Commercial and Industrial Development, Apartment Rentals, Real Estate, Ontario and Quebec
10. Revenue Properties, Ltd.	610	yes	n.a.	941[f] 1,892[g]	Commercial and Industrial Development and Management

[a]Excludes joint ventures and affiliated companies;
[c]Includes joint ventures and affiliated companies; [d]Sales; [e]Approximately 3,000 acres per Financial Post; [f]Excluding lease backs;
[g]Including lease backs.

Toronto area activities greatly understate the total activities of these companies because land holdings for future development may not be reported in detail and because almost all companies have extensive operations outside the Toronto area. Typically, these land development companies develop and manage commercial and industrial property as well as developing residential land. Most maintain a residential construction division. Their operations extend across the country and often into the United States. They have their own trade association (The Canadian Institute of Public Real Estate Companies) which actively lobbies at all levels of government and has encouraged standardization of accounting and management practices.

A characteristic of the larger development firms is the large number of multiple directorships held by the directors and officers of the companies. An interlock is said to exist between two firms when they share a common director. The significance of an interlock is varied. Normally, directors of a parent company will sit on the boards of subsidiary companies so that an interlock may indicate an ownership link. On the other hand, financial institutions typically wish to supervise large investments by having a representative on the board of debtor companies, so that interlocking directorates may indicate important sources of funding. Similar observations may be made in the case of major suppliers or clients of a company.

Table 23 reports the results of a study of the interlocking directorship links in the 10 public land development companies in the Toronto area. The directors of these companies were identified from the annual reports for the fiscal year ending closest to December 31, 1974 and the outside affiliations were obtained from the Financial Post Directory of Directors. In a few cases, additional interlocks were discovered in the process of computing effective concentration in land development, described in the next section. The function of the affiliated companies was inferred from their titles and any further information available. In 10 percent of the cases, the function of the linked company was not determined.

TABLE 23: DIRECTORSHIPS HELD BY DIRECTORS AND OFFICERS OF TEN PUBLIC DEVELOPMENT CORPORATIONS

Type of Directorship	Abbey Glen	Bramalea	Cadillac Fairview	Consolidated Bldg. Corp.	Costain	Deltan	Markborough	McLaughlin	Monarch	Revenue Properties	Total
1. Other Developers and Property Management	17	2	20	3	11	9	15	6	19	3	105
2. Real Estate Brokers	0	0	0	0	0	0	4	0	1	0	5
3. Construction	0	6	0	1	0	2	3	0	0	1	13
4. Holding Companies	0	4	7	2	4	6	15	12	11	0	61
Total Horizontal and Related Links	(17)	(12)	(27)	(6)	(15)	(17)	(37)	(18)	(31)	(4)	(184)
5. Banks	2	1	5	0	1	0	3	0	0	0	12
6. Other Financial	5	8	5	4	3	5	21	6	6	3	66
Total Financial Links	(7)	(9)	(10)	(4)	(4)	(5)	(24)	(6)	(6)	(3)	(78)
7. Other NonFinancial	16	20	32	2	3	2	31	55	5	4	170
8. Partnerships	1	3	2	1	0	2	3	2	0	1	15
9. Unclassified	5	3	10	1	0	5	8	10	7	3	52
Total Links	46	47	81	14	22	31	103	91	49	15	499
Total Directors and Officers	20	14	23	11	11	7	19	11	11	10	137

Source: Compiled from data in Financial Post, Directory of Directors.

The data show a high proportion of interlocks with other developers and property management companies. These interlocks generally link the company involved with a subsidiary or a joint venture. No direct interlocks between the 10 public developers were found, although several are indirectly linked through third companies, frequently banks or insurance companies. However, Markborough Properties is linked twice with a private developer, George Wimpey (Canada), Ltd., and once with the Ontario Housing Corporation.

Contrary to expectations, very few links were found with real estate brokers or construction firms. The two main connections are a link between Markborough and A.E. Lepage, Ltd., a major Toronto real estate firm, and a link between Monarch Investments and its wholly owned subsidiary, Montrow Realty.

Twelve percent of total interlocks were with holding companies. Many of these companies may in fact own or control real estate developments and thus they have been included in the subtotal of links with related firms.

Every company has a link with a financial institution, and 5 of the 10 are interlocked with a bank. Other major financial interlocks are with life insurance companies and trust companies. It appears that a precondition for the success of these firms is a close relationship with at least one financial institution.

These public companies do not dominate the market. For example, in the discussion of concentration below, it will be shown that the top ten development firms accounted for 49.9 percent of the total registration of building lots over the 30-month period from 1973 to 1975. Of these ten, only five were public real estate companies. Of the remainder, one was a crown corporation, two were wholly owned subsidiaries of foreign public companies, and two were private companies not clearly associated with any foreign public company. Smaller firms, most of them private companies, accounted for the remaining 50 percent of building lot registrations.

Thus private development companies, as a group, are very important in the housing market. While most are much smaller than the large public companies, some, especially those building

and managing apartment buildings, are of a scale comparable to the largest public developers. Since private companies are required to report only the names and addresses of their directors, very little public knowledge is available about their operations.

The real estate development business is characterized by many projects operated as joint ventures or partnerships. Joint ventures may be between public companies, between private and public companies or between private companies. In some cases, a large private land holder will sell a part interest in a land assembly to a public company, which will then manage the project. A consequence of this prevalence of joint ventures is that a company's proportionate share in land and development projects may understate the amount of control exercised by a company in the market, while a simple accumulation of all projects of land holdings of a group of companies may lead to double counting.

Concentration

1. Measurement of Concentration

It is frequently asserted that the ownership of land suitable for development is highly concentrated (e.g., Ontario Economic Council (1973), p. 35). Two objectives of this study are to document this claim and to assess whether high concentration in the ownership of land can be expected to affect the price of the housing stock. High concentration in the supply of new housing will not confer market power on developers or builders unless the annual production of these firms is a large fraction of the relevant stock of housing.

Concentration should be measured with respect to a well defined market. Ideally, the products included within the market should be close substitutes for each other and only distant substitutes for products outside the group. It is probably impossible to partition the products of a modern economy (including housing) into mutually exclusive sets, each satisfying the above conditions. In particular, since rental accommodation is a reasonably close substitute for owner-

occupied accommodation and existing houses of any specific description are very close substitutes for new housing of the same type, concentration data for the new residential construction market are likely to be seriously misleading unless considered simultaneously with concentration data for the relevant stock of existing housing. (See Steiner (1968) for a further discussion of market definition).

It is useful to attempt to measure concentration in the supply of new residential construction at three points: concentration in the stock of potentially developable land, concentration in the supply of serviced building lots and concentration in the supply of new sale and rental housing. The concentration of ownership of land holdings is important since it may determine whether or not raw land will be available to developers at competitive prices. Concentration in the supply of serviced building lots influences the degree of competition in that market. Concentration in the construction of new housing is of importance in assessing the degree of concentration in development relative to construction, and concentration in apartment construction is a good proxy for concentration in high density land development, since most apartments are built by the developer.

Concentration in land holdings was examined in the previous chapter, where it was shown that substantial regional concentrations of land ownership exist, but that the overall level of concentration was not sufficient to lead to a presumption of tacit collusion among developers. On the other hand, it was conjectured that the high regional concentrations might lead to less rapid developments of the land than would occur under perfectly competitive conditions.

2. Concentration in Land Development

Land development has been defined as the conversion of raw land to land ready for construction, a process which requires the approval of planning authorities and the installation of services. The output of land development is a serviced building site. Information on the concentration of land

development for apartment buildings is given in the next section. Information on the development of land for single-family and semi-detached houses can be obtained from the records of the Ministry of Housing.

As described in detail in Appendix D, the Ministry of Housing maintains a summary record of plans of subdivision. From these records it was possible to estimate the concentration in the supply of building lots in the Toronto CMA and regions over the 30-month period January 1, 1973, to June 30, 1975.[3]

There is no agreement among economists on the best measure of industrial concentration. At best, a concentration index can only summarize in a single number the information contained in an entire distribution of output by rank of firm. For this study the most commonly used measures were computed, namely the four, six and ten-firm concentration ratios and the Herfindahl index.

The three concentration ratios are simply the share of the four, six and ten largest firms in the output of industry, respectively. The Herfindahl index is computed by summing the squares of the market share of each developer. This measure has a range from 1/N to 1.0, where N is the number of firms in the industry. A value close to unity implies that the industry's output is virtually monopolized by the largest firm, while a value of 1/N implies that all firms are of equal size. For further discussion the reader is referred to Scherer (1970, ch. 3).

Data similar to the subdivision data were obtained for registration of condominium apartment and townhouse units. A condominium project is reviewed in the same way as a subdivision application, and it may have the effect of dividing land. However, if the site is part of a recently approved plan of subdivision, the condominium application will be circulated

[3]Notice that for semi-detached dwellings, one building lot corresponds to two dwelling units.

less widely and approved more rapidly. Since condominium applications cover row housing and apartments, this concentration data complements the building lot concentration data.

Tables 24, 25 and 26 present the concentration data for the Toronto CMA and the component regions. The leading developers and their individual market shares are given separately in Appendix E. It will be noted that the six-firm concentration ratio over this period was 37.9 for the area as a whole and ranges from 58.4 to 97.7 for the individual regions. This is noticeably above the nominal land ownership concentrations found by Markusen and Scheffman (29.5% for their restricted sample) but is roughly equal to the effective ownership concentration computed by them.

The concentration data of Tables 24 to 26 will understate true market concentration if many development firms are under the ownership or control of a common owner. Ownership data is not available for private corporations, but all corporations operating in Ontario must file the names and addresses of their directors and principal officers and this provides a method of identifying companies which may be commonly controlled.

The directors of all companies accounting for more than one percent of total building lots, condominium apartments or townhouse registrations were obtained from the Ministry of Consumer and Commercial Relations. Companies which shared a common director were considered to be associated and a tabulation of the operations of these linked companies appears as Table 27. In most cases only two or three companies were interlocked. In one case, the Duffins Creek Complex, three groups of firms were tenuously connected by two interlocking directors. It is most unlikely that the actions of these firms could be highly co-ordinated.

Using the groups shown in Table 27, market shares for linked firms were computed for the Toronto CMA. Table 28 summarizes the results. Nominal concentration refers to the data on unlinked firms, effective concentration to firms linked by common directors. It is apparent that linking firms does not greatly increase concentration ratios in building lots

TABLE 24: NOMINAL CONCENTRATION OF THE REGISTRATION OF BUILDING LOTS, TORONTO CMA AND REGIONS, JANUARY 1, 1973 - JUNE 30, 1975

Region	Total Lots	Market Share of Largest 4	6	10	Herfindahl Index[a]
Toronto CMA	18,734	29.2 (28.6)[b]	37.9 (35.9)[b]	49.9 (46.1)[b]	.0332
Durham	1,103	91.2	97.7	100.0	.2690
Halton	1,813	54.2	67.3	85.4	.1020
Metro Toronto	4,873	45.4 (34.5)[c]	58.4 (45.5)[c]	74.7 (60.4)[c]	.0759
Peel	8,813	48.8	59.2	70.5	.0797
York	2,132	58.1	70.9	84.1	.1053

[a]Sum of the squared market share of each developer.

[b]Excludes Ontario Housing Corporation with 1,032 lots or 5.5% of Toronto CMA Total.

[c]Excludes Ontario Housing Corporation with 857 lots or 17.6% of Metro Toronto Total.

Source: See text.

TABLE 25: NOMINAL CONCENTRATION IN THE REGISTRATION OF CONDOMINIUM TOWNHOUSES, TORONTO CMA AND REGIONS, JANUARY 1, 1973 - JUNE 30, 1975

Region	Total Units	Market Share of Largest 4	6	10	Herfindahl Index
Toronto CMA	9,378	23.4	30.6	41.7	.0266
Durham	217	100.0	100.0	100.0	.3531
Halton	565	63.2	83.0	100.0	.1451
Metro Toronto	4,222	39.7	49.5	62.6	.0577
Peel	3,530	32.8	43.8	61.4	.0513
York	844	62.1	74.5	92.9	.1218

Source: See text.

TABLE 26: NOMINAL CONCENTRATION IN THE REGISTRATION OF CONDOMINIUM APARTMENTS, TORONTO CMA AND REGIONS, JANUARY 1, 1973 - JUNE 30, 1975

Region	Total Units	Market Share of Largest			Herfindahl Index
		4	6	10	
Toronto CMA	7,700	39.1	47.5	61.4	.0559
Durham	-	-	-	-	-
Halton	165	100.0	100.0	100.0	1.0000
Metro Toronto	6,482	46.4	54.8	69.8	.0723
Peel	773	81.2	93.8	100.0	.2650
York	280	100.0	100.0	100.0	.5000

Source: See text.

or condominium apartments, but that it does lead to noticeably higher concentration ratios in condominium apartments. Tables 29 through 31 list the ten major groups of firms in each category.

3. Concentration in Building

Concentration in building should be noticeably lower than concentration in land development. This reflects the developers' practice, referred to earlier, of selling serviced building lots to independent builders. Accordingly, concentration in ground unit production should be lower than concentration in apartment construction, since the latter buildings are normally built by the developer. In order to verify this conjecture and also to aid in identifying the largest apartment developers, data on building permits issued by municipalities were collected for the Toronto CMA for the years 1973 to 1975 inclusive, as described in Appendix D. Concentration ratios were developed for the total sample and for each of the four Regional Municipalities and Metropolitan Toronto. Table 32 summarizes the results. Details for each region are

TABLE 27: OPERATIONS OF LINKED COMPANIES, BUILDING LOTS AND CONDOMINIUM UNITS, 1973-75

Rank (by building lots)	Company Names	Building Lots	Condominium Town Houses	Condominium Apartments	Comments
1.	Markborough Properties	722			Common Director
	Wimpey Homes Ltd.	1,466	181		
	Joint Venture of Preceding	15			
		2,203	181		
2.	Cadillac Fairview	1,428	351	180	A joint venture with
	Modular Precast Dev.			864	Greenwin, Meridian,
		1,428	351	1,044	Belmont & Heathcliffe
3.	Deltan Corporation	310	226		Deltan acquired
	Morenish Land Developments	615			Morenish, 1974
		925	226		
4.	Darcel Construction	32	136		Common directors
	Flowerton Investments			351	with Darcel
	Tip-Top Construction				
	Sub-total	32	136	351	
	Duffins Creek Estates	25	63		Common director
	Longmoor Building			270	
	Daylite Investments	226[b]			
	Sub-total	251	63	270	
	Dunjon Properties		169		Common director
	Javic Holdings	238			or address
	Silver Rose		275		
	Sub-total	238	444	0	
	Duffins Creek				Darcel Group and
	Composite	521	643	621	Dunjon Group each interlock with Duffins Creek Group

[b]Joint Venture with Halton Land Group.

TABLE 27 (cont'd): OPERATIONS OF LINKED COMPANIES, BUILDING LOTS AND CONDOMINIUM UNITS, 1973-75

Rank (by building lots)	Company Names	Building Lots	Condominium Town Houses	Condominium Apartments	Comments
5.	Whitehall Development		435		Directors of Goldenboy appear to be wives of two directors of Whitehall
	Golden Boy Investment	225			
		225	435		
6.	Costain Estates			140	Costain owns 50% of Woburn
	Woburn Gate			140	
				280	
7.	Dalecore Construction			153	First three have common director; Kuhlwin interlocked with Jarwin; Doramaxim at same address
	Kuhlwin Construction			276	
	Ogee Holdings			266	
	Jarwin Construction		148		
	Doramaxim Investments			254	
	Kuhlmax Development			230	
			148	1,179	
8.	Eastcan Holdings		726		Three common directors
	Rondell Realty		86		
			812		
9.	Westbury Developments		120		Strathmore and Westbury have common address
	Westbury East Lakes Ltd.		57		
	Crossroads Apt. Ltd.			218	
	Strathmore Development Co.			216	
			177	534	
10.	Domain Properties			114	Three interlocks with Domain
	Anglo York Industrial Ltd.		74		
	Great Pyrennes Construction		77		
			151	114	

TABLE 28: NOMINAL AND EFFECTIVE CONCENTRATION IN BUILDING LOT AND CONDOMINIUM REGISTRATIONS, TORONTO CMA, JANUARY 1, 1973 - JUNE 30, 1975

	Building Lots[a]		Condominium Apartments		Condominium Town Houses	
	Nom.	Eff.	Nom.	Eff.	Nom.	Eff.
Largest 4 firms	29.2	33.1	39.1	49.1	23.4	26.6
6 firms	37.9	42.9	47.5	64.8	30.6	34.9
10 firms	49.9	53.3	61.4	81.1	41.7	46.5

[a]Includes Ontario Housing Corporation.

TABLE 29: LARGEST TEN REGISTRANTS OF BUILDING LOTS, LINKED FIRMS, JANUARY 1, 1973 - JUNE 30, 1975

Rank	Name	Building Lots	Market share	Cumulative Market Share
1.	Wimpey-Markborough	2,203	11.8	11.8
2.	Bramalea	1,532	8.2	19.9
3.	Cadillac-Fairview	1,481	7.9	27.8
4.	Ontario Housing	1,032	5.5	33.4
5.	Deltan-Morenish	925	4.9	38.3
6.	Consolidated Building	912	4.9	43.2
7.	Victoria Wood	645	3.4	46.6
8.	Monarch	547	2.9	49.5
9	Woodbridge West	427	2.3	51.8
10.	West Hill Redevelopment	325	1.7	53.5
	Total Lots	18,734		100.0

Source: See text.

TABLE 30: TEN LEADING REGISTRANTS OF CONDOMINIUM APARTMENTS, LINKED FIRMS, JANUARY 1, 1973 - JUNE 30, 1975

Rank	Name	Total Units	Market Share	Cummulative Market Share
1.	Kuhl Group	1,179	15.3	15.3
2.	Cadillac-Modular	1,044	13.6	28.9
3.	Flemingdon Park Condominiums	910	11.8	40.7
4.	Del Zotto Enterprises	646	8.4	49.1
5.	Duffins Creek Group	621	8.1	57.1
6.	River Dell Holdings	588	7.6	64.8
7.	Westbury Group	534	6.9	71.7
8.	Victoria Wood	302	3.9	75.6
9.	Arsando	223	2.9	78.5
10.	Halliwell Terrace	198	2.6	81.1
	Total Units	7,700		100.0

Source: See text.

TABLE 31: TEN LEADING REGISTRANTS OF CONDOMINIUM TOWNHOUSES, LINKED FIRMS, JANUARY 1, 1973 - JUNE 30, 1975

Rank	Name	Total Units	Market Share	Cummulative Market Share
1.	Eastcan-Rondell	812	8.7	8.7
2.	Duffins Creek Group	643	6.9	15.5
3.	Rockport Holdings	600	6.4	21.9
4.	Whitehall Development	435	4.6	26.6
5.	Victoria Wood	431	4.6	31.1
6.	Cadillac Fairview	351	3.7	34.9
7.	Coventry Group	322	3.4	38.3
8.	Bayshore Erin Glen	310	3.3	41.6
9.	Brahamgate Investments	231	2.5	44.1
10.	Deltan	226	2.4	46.5
	Total Units	9,378		100.0

Source: See text.

TABLE 32: CONCENTRATION MEASURES IN BUILDING, TORONTO CMA, 1973-1975

Region[a]	Total No. of Builders	All Units			Ground Units			Apartment Units		
		C_6	H	N	C_6	H	N	C_6	H	N
Toronto CMA	3,917	18.3	.0104	17 (31.5)	16.7	.0095	19 (36.1)	23.5	.0186	27 (54.9)
Durham	109	60.2	.0823	19 (92.3)	60.9	.0940	20 (92.9)	100.0	.5711	2 (100.0)
Halton	505	35.1	.0338	26 (72.4)	36.0	.0391	24 (69.4)	91.3	.1519	8 (99.5)
Metro	1,629	22.4	.0154	22 (44.4)	22.0	.0131	19 (41.3)	27.0	.0228	33 (68.5)
Peel	869	26.6	.0203	25 (59.5)	28.8	.0217	20 (53.8)	48.2	.0568	23 (96.3)
York	989	40.3	.0461	17 (61.8)	37.5	.0340	18 (59.7)	86.9	.2060	10 (99.9)

C_6 - Six Firm Concentration Ratio.

H - Herfindahl Index (the sum of squares market shares).

N - number of firms with market shares in excess of 1% (cummulative market share of these firms is given in parentheses).

[a]Only those municipalities which were also in the 1971 CMA are included in the entire for each region,

Source: See text.

provided in Appendix E.

The results are consistent with the conjectures made above. The six-firm concentration ratio for all areas is 18.3 percent which compares with a 39.5 percent ratio for building lot registrations. Thus, the construction of single and semi-detached units is clearly less concentrated than the development of the land for these units.

The concentration data for apartment buildings are especially interesting since they also provide an indication of concentration in land development for high density projects. Over the entire sample, concentration was reasonably low by usual standards (a six-firm concentration ratio of 23.5 percent), but the regional concentration data are significantly higher. In Peel, for example, the six-firm concentration ratio for apartment units was 48.2, and for the region of Halton, eight builders accounted for virtually all apartment development.

The above concentration data do not account for intercorporate linkages. Time did not permit a search of directors of the major builders: if one had been made, a number of links would certainly have been found. It seems unlikely, however, that sufficient intercorporate links exist to raise the concentration ratios significantly.

The single most important linkage is that between W.B. Sullivan Construction and Deltan Realty, the president of the former company controlling the vast majority of the shares of the latter. Consolidation of the units of these two companies raises the six-firm concentration ratio for all units from 18.3 to 19.9 and places the combined enterprise ahead of Cadillac Fairview in the ranking.

Other Aspects of Market Structure

Although concentration is the market structure measure for which most information has been collected, some evidence is available on other dimensions of market structure, in particular, the degree of vertical integration of firms participating in the several markets. Firms may participate directly in several markets, or they may be linked with firms participating in

other markets by formal ownership links or through informal contacts. The extent of the latter has been estimated by examination of interlocking directorships among the major firms.

Vertical integration between land development and building is common. A recent survey conducted jointly by CMHC and the Housing and Urban Development Association of Canada (Canadian Economic Services, 1975), indicated that on a national level, roughly 40 percent of all ground units are started on lots developed by the builder, with an additional 40 percent obtained from other other private developers. Integration is markedly more common for row and townhouses (60-65 percent) than for single-detached and semi-detached (roughly 35 percent) (p. 30). Table 33 presents the complete results. Spurr (1974, p. 188) reports an earlier survey indicating that approximately 87 percent of large builders also develop land. These statistics should be treated with caution, since as noted earlier, there is a well-developed market in serviced building lots, and many of those who built on their own land will also sell serviced lots.

Integration between development and servicing appears rare. Of the major developers, only Wimpey appears to maintain a servicing division: this is probably due to historical factors associated with the parent company. In a study of the interlocking directorate among ten public developers reported above, only 12 of 500 interlocks appeared to be with construction or contracting companies. The production of apartment dwellings is highly integrated with the rental of apartment units, that is, most new apartment dwellings are retained by the builder as income property. Some indication of the importance of this may be obtained from Spurr's survey of development corporations operating in 1972. His data indicated that some 31,000 apartment units were held in 1972 by the 23 firms in his sample. This accounted for about 13 percent of the total stock of apartments in the Toronto area.

There is very little direct evidence on the height of barriers to entry in land development. The clearest barrier

TABLE 33: SOURCE OF BUILDING LOTS, CANADA, 1974
(NON-NHA FINANCED DWELLINGS ONLY)

Source	Single-detached	Semi-detached	Row and Townhouse	All Houses
	(percent of houses)			
Self	32.2	37.0	62.6	40.0
Other private developer	44.9	45.4	27.2	41.1
Municipality	6.6	1.2	0.0	4.6
Province	5.7	6.4	7.7	6.3
Federal/Provincial	0.5	0.0	0.0	0.3
Other	3.1	0.4	0.2	2.1
No answers	7.0	9.5	2.3	5.6
Total	100.0	100.0	100.0	100.0

Source: CANECS (1975, p. 30).

appears to be land ownership. The Markusen-Scheffman data indicate that upwards of 40 percent of the most desirable land in each region is held by as few as six developers. The height of this barrier is not easy to determine. A major factor is the tendency of planning authorities to prefer development of land in orderly sequence rather than in a hodge podge of scattered subdivisions. It is clear that the provision of local public services may be facilitated by contiguous development, but the consequence is that the number of alternatives to development of a particular parcel of land in a region is greatly limited. If all land scheduled for development is held by a small group of companies, entry by others is virtually precluded.

There is some evidence that economies of scale may be sufficiently important in land development to increase the difficulty of entry. As noted in Chapter 3, the modal plan size category for building lot registrations was 200-400 lots or 3.2 to 6.4 percent of the average annual rate of building lot registration. However, almost one-quarter of total lots were registered by firms with total registration exceeding 1,600

lots each. The existence of some firms with very large land development operations suggests that there may be some advantages to firm scale above the size of an individual plan of subdivision. It was suggested that the source of these economies might be with cost reductions in planning and internalization of certain mutual externalities in the marketing of commercial, residential and industrial land when development at the 'community' scale is undertaken.

The development of a new'community' typically involves several plans of subdivision and an area of more than 300 acres of land. The existence of economies of scale in this process would imply a substantial absolute capital cost barrier to entry, since the capital value of the undeveloped land would be of the order of $20,000 per acre or 6 million dollars for a 300 acre parcel.

Barriers to entry into building appear very low. In the preceding chapter, it was apparent that economies of scale in building are exhausted at a very small percentage of the total market. Product differentiation does not form an important barrier, and there are no absolute cost advantages accruing to existing firms. Some evidence on conditions of entry may be obtained from a comparison of the list of builder and developer members of the Toronto Homebuilders' Association.[4] The 1968 directory lists 174 members. The 1975 directory lists 184, of whom 102 did not appear in the 1968 directory. Thus turnover in the building industry is quite high.

Summary and Explanation of Market Structure

In summary, new housing is produced as the final product of a process involving the two stages of land development and building. The two stages are initially integrated in the production of apartment dwellings, but much less so in the production of single family dwellings. Barriers to entry into

[4] Toronto Metropolitan Homebuilders' Association, "Roster of Members and Buyers' Guide, 1968" and "Directory of Members, 1975". Obvious changes of name were not counted as implying new entry.

land development may be significant, the major ones being the joint effect of moderately concentrated land ownership, economies of scale in large scale 'community' development and the apparent preference of planners to restrict current development to areas contiguous with existing development. Concentration in land development in the CMA as a whole is moderately low: individual regions experience higher concentration. Concentration in apartment buildings is reasonably low for the CMA as a whole, but is significantly higher in the regions. Concentration in the production of ground units is low in the CMA and most regions.

These patterns of concentration and integration are consistent with what might be predicted, given knowledge of the basic production process and constraints on entry. It was shown in Chapter 2 that it is not profitable to integrate forwards into a perfectly competitive industry. The building of single and semi-detached houses, with no barriers to entry, very few scale economies and highly divisible product, closely approximates the conditions of perfect competition. Large numbers of builders under these conditions guarantee that construction services will be supplied at marginal cost, or alternatively, that the price bid by builders for serviced lots will reflect the value of the marginal product of that lot. This is consistent with the general observation that builders determine the amount they are willing to bid for a serviced lot by deducting from current selling price the cost of construction. Since the building of ground units is competitively organized, there is no incentive for developers to integrate forwards into construction. The fact that some of them do build single houses may reflect a desire to set the 'tone' of a new subdivision or to aid in providing information to be used in negotiating with other builders.

Since entry into apartment construction appears to be almost as easy as entry into ground unit construction, it is something of a puzzle that vertical integration of development and building should be the rule in the former case. One possibility is that the scale of apartment construction is

necessarily the same as the scale of planning, whereas units in a large subdivision may be built by many different builders. Moreover, the market for apartment blocks is much thinner than the market for houses and the blocks themselves are less homogeneous, so that it would be difficult to establish a market price for any particular type of apartment building. Thus, a contractor bidding on an apartment job would require as much information about the particular long term rental prospects of a building as the land developer to whom he was submitting his bid. Under these circumstances, bilateral negotiation would be extensive and there would be noticeable returns to integration.

The degree of integration between building and development is thus susceptible to rational explanation. The remaining problem is the higher degree of concentration in land development than in building, and, in particular, the presence of land assemblies much larger than the average plan of subdivision. There are two plausible lines of explanation: either these larger holdings represent a source of market power, or they allow realization of cost savings and internalization of external economies.

The presence of a large stock of existing dwellings seriously reduces the credibility of the market power argument. We have seen that complete collusion by developers could not raise the price of housing by more than a few percentage points over a year. Moreover, with the ease of entry at reasonably small scale, small parcels of land can be easily subdivided if the price of housing rises much above the marginal cost of development, although restrictive planning policies could prevent effective competition from this source. Although communication between the major developers must be quite good, the gains from collusion appear to be low due to the elasticity of flow demand and the prevalence of smaller parcels of land under independent ownership.

The alternative explanation of the growth of large land holdings is that development of land on this scale is more profitable without regard to the possibility of limiting the

growth of the stock of housing. There are three important ways in which the development of large land assemblies (say in excess of 500 acres) might yield higher unit profits than development at the scale of a single plan of subdivision. The first is that there may be economies of scale in planning at the level of the ' community' (19-20,000 persons or 300-600 acres) rather than at the level of a neighbourhood or cluster of houses, as discussed in Chapter 3 above. Negotiation costs are reduced when commercial, recreational and low and high density residential land can be freely reallocated within the planning area. Secondly, residential development increases the value of nearby commercial land and vice versa. Development at a scale large enough to include both local and regional shopping centres as well as residential land may increase the aggregate value of the parcel if held under single ownership. Finally, the discussion of market power in Chapter 2 established that when development occurs on a sufficiently large scale within a subregion as to lead to a negatively sloped flow demand for serviced land, profits may be increased by monopolizing the supply of serviced land. The market power in this case is derivative from the factors which encourage planning and development at a large scale and from the differentiation of housing by location.

This study has been unable to provide much evidence which would directly test the alternative hypotheses on the economies of large scale development. It was established that there is no significant advantage to large firms in the speed with which planning approvals can be obtained. Further research on this point might focus on the value of land in developments of various sizes. However, the weakness of the pure market power argument indirectly supports the economies of scale arguments as explanations of the growth of large scale assemblies.

CHAPTER 5
MARKET CONDUCT

Evidence on the pricing policies and competitive behaviour of development firms is scarce. This chapter briefly reviews the conduct of firms in the new housing market and concludes that, while there is little evidence of conventional monopolistic or restrictive practices, large developers have a strong incentive to attempt to influence provincial and municipal land use policies.

Pricing Behaviour

There is no evidence of agreements of any kind to set prices of building lots or new dwellings. Participants in the industry generally claim that rivalry and distrust are characteristic of the relationships between major firms. It is certainly true that attempts have been made to cartelize some of the building trades, as discussed in Chapter 3, but on the whole these do not seem to have been successful. It is clear from tne analysis of Chapter 2 that the gains from collusion to set prices would be very low, given the high degree of substitutability between new and existing housing, so that an absence of successful collusion is not surprising.

Prices for houses are generally set at the expected market price, which can be easily obtained from information on transactions prices on other house sales. Information on transactions prices of houses is collected by at least one company and sold on a commercial basis. Similarly, developers compute the expected selling price of building lots by deducting from the expected selling price of the eventual dwelling, an allowance for the builder's costs and profit.

Discussions with land developers indicate that a common strategy is to price building lots so as to create excess demand.[1] One developer may deal with a number of builders

[1] That is, more builders wish to purchase lots at the fixed price than there are actually available. As explained below, this is not inconsistent with profit maximization.

and will normally allocate him a certain number of lots at a fixed price. This strategy may be explained as an attempt to reduce negotiation costs for the developer and as a device to retain control over the performance of the builder. Since poor construction of one group of houses may affect the demand for others, the developer who wishes to maximize his total return from a development will wish to supervise design and construction methods fairly closely. While restrictions on the builder's actions could be written into a formal contract, it seems clear that the developer gains in bargaining power when other builders are known to be anxious to purchase lots.

The absence of cost-plus pricing rules is generally confirmed by discussions with industry participants and by observed behaviour during the period of rapidly rising house prices between 1972-74. At that time there were many reports of new house prices in a single development rising by several thousand dollars in as many months. This behaviour is quite consistent with the competitive price determination model presented in Chapter 2 is inconsistent with the use of cost based pricing formulae.

Coercive Activity

Public attention has been drawn to actions by developers which appear to be either direct intervention in political decisions or harmful to certain groups, particularly those with low incomes and young families. Some of these actions are encouraged by the existing market structure. Rather than being indicative of traditional market power, the alleged activities are consistent with the behaviour of competitive firms in a market in long-run disequilibrium. Large gains are to be made by exploiting differences in the valuation of land in alternative uses, and these gains will justify substantial investment in removing the barriers to their achievement.

Allegations of direct political involvement by development firms in municipal and provincial government are best illustrated in Lorimer (1972, Chs. 5-9). Lorimer argues that the major developers directly intervene in the political process through

support of and participation in the Liberal and Conservative parties and in municipal campaigns. He supports this contention by observing that senior party officials often are directors of major development companies (p. 104). He also notes an interchange of personnel between large developers and government agencies responsible for housing, or even between developers and the provincial cabinet (p. 83). Indirect control of municipal politics is alleged to arise out of the prevalence on city councils of persons associated in one way or another with land development or real estate, such as lawyers, real estate and insurance agents and engineers. (p.98). Lorimer further argues that the political influence of developers is exercised so as to generally restrict the supply of planning approvals, although he recognizes that this position appears to conflict with the observed efforts of land developers to promote more rapid construction. (pp. 66-67, 74).

It is certainly true that land developers actively lobby at all levels of government through their trade associations.[2] Furthermore, much of the skill in land development lies in obtaining approval from various public bodies for proposed projects. Thus, every developer's work brings him in close contact with government officials at all levels. There is a strong incentive to attempt to gain the support of one part of the bureaucracy to fight another. For example, the support of the municipal recreation department might be sought by promising the construction of recreational facilities if the project is allowed to progress.

Behaviour of the type discussed above has come to be known in the economic literature as "rent seeking". (Kruger, 1974).

[2]The main ones are the Housing and Urban Development Association of Canada (HUDAC), which primarily represents smaller builders; the Urban Development Institute (UDI), an association of land developers primarily in the Ontario region, and the Canadian Institute of Public Real Estate Companies (CIPREC), an association of the major public companies.

As was shown by the analysis of the constraint on the flow supply of serviced land, the price of both existing houses and serviced land rises when the rate of subdivision approval is restricted. As a result, owners of existing property receive a capital gain, and the unit profit on that land which is serviced is increased. The additional income accruing to property owners and developers under such circumstances may be called rent, since it may be interpreted as a payment to a factor which is absolutely fixed in supply. It should be noted that the amount of the rent is determined by the level of the stock demand for housing, which is a function, among other things, of the rate of growth of an urban area, and that it accrues to the land developer only because subdivision approvals are distributed free of charge. If the limited zoning and subdivision rights were sold at auction to the highest bidder, the municipality would capture some of the rents.

Lorimer is on solid ground, therefore, when he points out that property owners have strong incentives to increase their wealth by encouraging growth while restricting development, and that there are also strong incentives to promote development by relaxing zoning restrictions to allow specific projects. We have here the classic case of conflict of individual and group interest which arises in any case of output restriction: developers, just like egg producers, have an individual incentive to increase production but will suffer a capital loss as a group if they do. It seems difficult to believe, however, that all firms in the property development industry have sufficiently common interests to act as a collusive group, especially in view of the relatively low concentration ratios discussed in the previous chapter. An alternative hypothesis is that the high rate of participation in municipal politics by those with special interests in development reflects the wide range of constraints imposed on property development by municipal government and the consequent rents to be gained by appropriately influencing government policy.

It should be made clear that rent seeking by development companies is not necessarily to the public detriment. The

high profits to be made in redeveloping or subdividing land are a reflection of the high valuation placed on developed land in residential or other use relative to its value in its current use. If the limitations on growth are relaxed, more housing is produced and many people gain: the consumer by lower prices for the housing stock, the seller of raw land by an increased sale price and the developer by his 'middleman's profit'. The theory of welfare economics suggests that when an item, such as land, is reallocated from a relatively lower valued use to a relatively more highly valued use, those who gain from the transaction could, in principle, compensate those who lose and still find the transaction worthwhile. The disturbing factor is that politically powerful groups may capture more than their share of the gains from development by using their knowledge of the government to modify the rules of the game in their favour. It is well beyond the mandate of this study to assess the desirability of political action by any group of persons. It may be pointed out, however, that the underlying force generating the actions complained of is the discretionary power of controlling development held by the various agencies of government.

A related set of allegations concerning land developers involve coercive behaviour directed at groups, especially tenants, in areas in which land development is to take place. Tactics ranging from 'block busting' to physical intimidation are alleged to induce property owners to sell and to force tenants to move out (Lorimer (1972), pp 40-45). Once again, these are tactics induced by the great gains to be made on redevelopment of land. The problem in this case is twofold. First, the capital value of an existing dwelling depends on the nature of its immediate surroundings, so that a capital loss can be imposed on other owners by the owner of a group of houses simply by his allowing those houses to deteriorate. Second, although the market for existing housing may be essentially competitive throughout a city, an owner in an area zoned for redevelopment is forced into bilateral negotiation with the developer. In this situation, a single holdout could,

in principle, demand all the expected profit on a project on his selling price, while the developer will be strongly tempted to arrange his purchases in such a way as to reduce their aggregate cost to him. Special study would be required to see if developers under these circumstances actually manage to depress the price of the houses they acquire below their market value in residential use, but it seems certain that the bargaining relation is unequal enough to guarantee that most of the gains from trade will accrue to the developer.

The political and coercive actions of developers are not causes, but rather symptoms, of high prices for new and existing housing. An increase in the stock demand for housing leads to a shift upwards in the demand for land for building. Restrictions on the rate at which redevelopment can proceed maintain a high differential between the price of land zoned for residential use and that zoned for higher density use. This price differential encourages political action to obtain zoning or subdivision approval and also encourages developers to assemble land for high density development.

When there is a large stock of high density housing relative to demand, as shown by rents with capitalized value less than the cost of construction of a new building, new apartment construction ceases, and the demand for redevelopment land is reduced. This appears to have been the case since about 1974 in the Toronto area, and the absence of horror stories about redevelopment projects since that time is probably a reflection of the reduced gains to be made in apartment development.

CHAPTER 6

PERFORMANCE

The basic performance goals of an economy are usually considered to be allocative efficiency, technical progress, full employment without inflation, and equity. Measurement of a single industry's contribution to these goals is difficult and most measures commonly used in assessing the performance of the housing market are not clearly related to any overall performance goal. In this chapter, two specific indicators of performance are considered: profit rates and the housing indicators adopted by the Economic Council of Canada. It is concluded that, considered over a long period of time (say 10 years), there is no evidence of monopolistic restriction in the market and that the quantity of housing services purchased by most families has increased. However, events on a shorter time scale indicate the presence of supply restrictions leading to particularly rapid price increases and a substantial re-distribution of income away from young families. This may be judged both allocatively inefficient and inequitable.

Profit Rates

One indicator of the efficiency of the housing market is the rate of profit earned by developers and builders. Normally above average profits in an industry are expected to lead to the entry of new firms, an expansion of output and a reduction in prices. Thus high short run profits may be a desirable feature reflecting only a sudden increase in the demand for housing. A prolonged period of high profits, however, indicates the presence of barriers to the entry of new firms, and leads to the presumption that output in the market is too small.

The converse is not true. When barriers to entry exist, firms need not earn high profits because costs may rise as the penalty for failure to minimize costs is reduced. Thus while persistent high rates of profit are an indicator of allocative inefficiency, average profit rates are consistent with barriers

to entry, insufficient output and excessive prices.

Profit rates may also indicate the redistributive effect of market imperfections. High profits indicate that income is being distributed in favour of the owner of the companies and away from purchasers. This may be of interest for political or sociological reasons.

There is no agreement on the most appropriate measure of profit rates. Two commonly used are the rate of return on invested capital and rate of return on equity. The latter is calculated by dividing net income by the shareholders' equity or net worth of the company. The former is obtained by adding long term debt capital to shareholders' equity and dividing net income plus interest payments by the result. Although total return on invested capital can be used to estimate how much capital equipment should be reallocated to the industry (Harberger, 1954), the rate of return on equity is a clearer indicator of redistributive effects. It also magnifies the deviation of profits in any one market from the industry average and permits the deduction of corporation income tax. Accordingly, after tax rates of return on shareholders' equity have been calculated for a number of public real estate companies and are reported in Table 34. The five companies shown have experienced after-tax rates of return on equity running from small losses to 34 percent annually. Table 35 presents comparative data for nine industrial divisions of the Canadian Standard Industrial Classification. It should be noted that all of these data are based on the published accounts of the respective companies and should be cautiously interpreted for the reasons discussed at length below.

The five public developers earned above average rates of return in four of the six years 1968-1973. The mean return on equity over that period was 9.6 percent for the developers and only 7.6 percent for all corporations. Since these five developers are the largest in the Toronto area, it is probable that their profit rates are above average for developers in the same region. It is certainly true that the reported rate of profit of the five greatly exceeds that of the category Real

TABLE 34: AFTER TAX RETURN ON EQUITY, MAJOR PUBLIC DEVELOPMENT COMPANIES

Company	Fiscal Year Ending Closest to December									
	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966
1. Bramalea	13.5	8.0	11.8	8.6	-0.3	-2.3	11.0	9.1	12.6	7.7
2. Cadillac Development[a] (Cadillac-Fairview)	11.9	11.0	16.2	11.9	11.0	11.0	16.1	7.4	23.7	-
3. Consolidated Building	13.3	28.1	26.1	29.7	17.5	18.3	-1.9	10.3	3.3	2.6
4. Markborough Properties	11.1	10.3	20.0	4.1	2.5	3.4	4.1	2.2	0.8	-0.4
5. S. B. McLaughlin	-	7.8	12.1	27.7	34.4	3.8	10.9	18.3	-	-

- not available

[a]Data for 1974 and 1975 are for Cadillac-Fairview Corp. The Cadillac Development year end was changed from December 31 to February 28 upon amalgamation.

Source: Computed from Annual Reports and Financial Post Corporation Service.

TABLE 35: PROFITS AFTER TAX ON EQUITY, NINE INDUSTRIAL DIVISIONS, CANADA, 1968-1973

	1968	1969	1970	1971	1972	1973
Agriculture, Forestry and Fishing	6.3	6.2	5.5	3.5	6.1	13.6
Mining	8.4	8.3	7.8	6.0	4.5	10.7
Manufacturing	8.1	8.6	6.2	7.7	8.7	12.8
Construction	10.6	9.3	6.4	9.8	9.5	12.0
Transportation; Communications and other Utilities	5.1	5.2	5.1	5.7	6.1	6.4
Wholesale Trade	8.2	8.6	7.2	9.8	10.1	12.1
Retail Trade	8.6	7.6	a	a	a	a
Finance	7.4	6.6	4.4	6.1	5.1	5.7
Services	10.3	17.0	5.8	6.9	7.0	8.3
Total	7.7	7.5	6.3	7.4	7.2	9.5
Real Estate Operators and Developers	7.6	7.2	5.3	6.4	7.0	8.3
Weighted Average, Five Major Public Development Co.	6.4	10.2	5.0	9.5	12.8	13.9

Source: Statistics Canada (61-207) and private correspondance, Table 4.1.

[a]The inclusion of results for provincial liquour agencies has distorted these data to the point of uselessness.

Estate Operators and Developers which was 7.0 percent over the six years and which was consistently below the mean for all corporations. There is a clear indication of substantially above average rates of return in 1972 and 1973. To the extent that the accounts of these five companies reflect conditions in the Toronto housing market, it is clear that large short-run profits were being earned in that period.

The profit rates reported in Table 34 are inadequate indicators of the profits earned in the Toronto housing market for both practical and conceptual reasons. Firstly, profit data are not available for companies not offering their shares to the public. Only five of the ten most active developers of building lots listed in Table 29 were public companies. Moreover, the large public corporations generally are diversified with income property, non-residential developments and miscellaneous investments outside of real estate development. It is impossible to segregate their earnings from the Toronto new housing market from other results in their financial statements. Thus the coverage of any sample of reported financial results must be both incomplete and imprecise in assessing the profitability of operations in the Toronto market.

Secondly, the after-tax rate of return is an inadequate measure even of the profitability of the companies for which it is available. The argument that reported return on equity is grossly misleading has been put in extreme form by James Lorimer (1972, 1975a and b), but the deficiencies of accounting rates of profit are well known. They include at least the following: an inadequate treatment of unrealized capital gains, inadequate reporting of the benefits of deferred taxes and depreciation allowances, sensitivity to the accounting treatment of certain items, and failure to identify profit taken in the form of high compensation payments to senior officers and directors. Many of these problems are particularly severe for land development companies.

Consider first the problem of unrealized gains on land inventories. Most development companies state the value of land held for development at acquisition value plus cumulated

expenses such as interest and taxes. In a period of rising land prices, the market value of the land may exceed its book value, but this will not be reflected in the accounts of the company until the land is sold. In the intervening period both earnings and shareholders' equity are understated. When the land is sold, earnings are overestimated and return on equity doubly so, because earnings properly attributed to more than one accounting period are expressed as a percentage of an undervalued equity. Consistent accounting would require the book value of land to be written up to market value annually, with the consequent increase in wealth recorded as income.

The second conceptual difficulty with the after-tax rate of return lies in the treatment of deferred taxes and capital cost allowances. Normally income is taxed on an accrual basis, but a special provision of the Income Tax Act allows income tax on the proceeds of real estate sales to be deferred until the cash is received. The accounting practice of most companies is to deduct deferred as well as current taxes from gross income in obtaining after-tax net income and the reported after-tax income is consequently lower than cash income received. A second source of deferred taxes arises when Income Tax Act allows capital cost allowance on buildings in excess of the depreciation charged by the firm in its accounts. This similarly leads to a deferred tax liability which reduces the firm's reported after-tax income.

The amount of income tax deferred by land development companies is large relative to that actually paid. Table 36 indicates that for a sample of five large developers, total taxes ranged from 47 to 54 percent of before-tax income for the years 1968-74, while the rate of income tax actually paid was always less than 16 percent. For these five developers, cumulative deferred taxes amounted to 91,691,000 or 40 percent of shareholders' equity. Thus tax deferrals provide these companies with a source of financing almost as important as equity investment.

TABLE 36: TAXES PAID AND INCURRED BY FIVE PUBLIC REAL ESTATE COMPANIES[a], 1968-1974

	Net Income Before Tax	Income Taxes Paid		Income Taxes Deferred		Total Income Tax
	($'000)	($'000)	%	($'000)	%	%
1968	9829	1521	15.5	3753	38.2	53.7
1969	15468	2436	15.6	5438	34.8	50.4
1970	7604	-1268	-16.7	5156	67.8	51.4
1971	15552	176	1.1	7289	46.9	48.0
1972	25142	471	1.9	11411	45.4	47.3
1973	44319	4802	10.8	17184	38.8	49.6
1974	57438	8241	14.3	22693	39.5	53.8

[a]Bramalea, Cadillac Development, Consolidated Building, Markborough Properties and S.B. McLaughlin. Cadillac Fairview data were used for 1974.

Source: Company Reports and Financial Post Corporation Service.

It is not appropriate to treat deferred taxes as income, as suggested by Lorimer since the taxes must in time be paid. But the tax deferrals do amount to an interest free loan from the government. A measure of the benefit obtained from the tax deferrals is the savings in interest which would otherwise be paid. If 10 percent interest were charged on the cumulative tax deferrals, before-tax income in 1974 would have been reduced by approximately 9 million dollars and after-tax return on equity to 7.8 percent. Thus a very substantial portion of the reported earnings of development companies is in effect a transfer from general tax revenue.

It has been asserted by Lorimer (1975a, paragraph 29) that the allowance for depreciation reported by the development companies (as opposed to the excess of capital cost allowances over book depreciation) should also be included in their income. From an economist's viewpoint, depreciation each year should exactly equal the change in market value of an asset, so that book value of an asset would accurately reflect the opportunity cost of holding the asset rather than disposing of it. For simplicity, individual firms often depreciate an asset according to an arbitrary rule such as straight line depreciation over the expected life of the asset. In the case of rental buildings such as apartments, the market value of a particular building may stay constant or even rise over time. If so, the deduction of depreciation from gross income causes net income to understate the real increase in the assets of the firm. The problem is analogous to that of unrealized capital gains on land and cannot be properly handled unless the market value of buildings is reported each year. As an indication of the magnitude of the problem, Lorimer found that book depreciation charged in 1974 by 20 public development companies was approximately 55 percent of tax deferrals in the same year. If buildings remained constant in value, the appropriate treatment would be to increase after-tax income by the same amount. Since any assumption about change in market value of buildings must be hopelessly arbitrary, the temptation to develop alternative rates of profit based on estimated capital appreciation has been resisted.

Two additional problems with return on equity as a measure of profit may be dealt with more briefly. Accounting return on equity is sensitive to many variations in accounting practice, such as the current deduction or capitalization of land development expenses, interest and taxes. In addition small closely controlled corporations may draw some profits in the form of high compensation payments to officers and directors. As an example, the aggregate remuneration of officers and directors of Consolidated Building Corporation in 1975 was $490,000, more than 10 percent of after-tax income. This tends to reduce the

reported rate of profit.

In view of the difficulties of interpretation of rates of return on equity, it is useful to consider an alternative profit measure: the internal rate of return on shareholders' investment. Ideally, a profit measure should indicate how fast the shareholders' wealth is increasing. This increase in wealth takes the form of increases in shareholders' equity plus the cumulated value of dividends received and reinvested. The internal rate of return is the compound growth rate which, had it been applied to the original investment, would have resulted in an equivalent increase in wealth. While the use of internal rates of return cannot circumvent the problem of divergence between market and book value of assets, it has the advantage of incorporating any increase in wealth obtained from the use of deferred taxes and depreciation reserves. If the period of time is long enough relative to the rate at which land and building inventories are turned over, the increase in book value of the company will approximate the increase in the shareholders' wealth. The internal rate of return is also invariant with respect to the choice of consolidation methods for joint ventures and the capitalization of development expenses. Thus the internal rate of return over an extended period of time is a good measure of the long-run profitability of an investment.[1]

[1] The internal rate of return in an investment is defined as the positive rate of interest for which the net present value (NPV) of a stream of investment outlays and returns is equal to zero. This rate of interest is found by solving the equation $NPV(r) \equiv -C_o + \sum_{i=1}^{n} F_i/(1+r)^i + M_n/(1+r)^n = 0$ where r is the rate of interest, C_o is the initial investment, F_i is the cash flow in the i^{th} year of the investment and M_n is the terminal value. To compute the internal rate of return from one fiscal year end, t_1, to another, t_2, the initial investment was set equal to shareholders' equity at t_1, the cash flow in later years was set equal to dividends paid less any increase in paid up capital, and the terminal investment was set equal to the shareholders' equity at t_2. Data were obtained from Annual Reports and the Financial Post Corporation Service.

TABLE 37: INTERNAL RATES OF RETURN FOR FIVE DEVELOPMENT CORPORATIONS 1966-1975

Bramalea Ltd.

Fiscal Year Ending Nov. 30	To 1967	1968	1969	1970	1971	1972	1973	1974
1966	14.9	14.4	13.6	8.8	6.5	7.0	8.2	8.2
1967		13.9	13.1	7.2	4.9	5.9	7.4	7.6
1968			12.5	4.9	2.8	4.5	6.4	6.8
1969				-2.2	-1.7	2.0	5.0	5.8
1970					-1.1	4.4	7.5	7.8
1971						9.4	11.8	10.8
1972							14.3	11.4
1973								8.7

Cadillac Development Corp.

Fiscal Year Ending Dec. 31.	To 1968	1969	1970	1971	1972	1973
1967	9.9	14.9	13.7	13.3	13.2	14.2
1968		17.9	14.8	14.0	13.7	14.8
1969			11.6	11.9	12.3	14.0
1970				12.1	12.6	14.8
1971					13.2	16.1
1972						19.0

TABLE 37: (Continued)

Consolidated Building Corp.

Fiscal Year Ending Feb. 28	To 1968	1969	1970	1971	1972	1973	1974	1975	1976
1967	-8.0	1.3	-3.6	2.3	5.4	11.2	18.5	21.3	20.2
1968		11.4	-1.3	6.0	9.0	15.5	23.5	25.8	23.7
1969			-12.7	3.4	8.2	16.7	26.1	28.1	25.3
1970				22.4	20.5	28.2	38.1	37.0	31.5
1971					18.6	31.2	43.7	40.3	32.9
1972						45.1	57.8	46.7	35.6
1973							71.0	47.3	33.6
1974								34.5	24.1
1975									14.5

Markborough Properties

Fiscal Year Ending Oct. 31	To 1967	1968	1969	1970	1971	1972	1973	1974	1975
1966	11.9	2.2	3.0	3.2	3.0	3.3	6.7	7.4	8.0
1967		2.3	3.3	3.3	3.2	3.5	7.0	7.7	8.3
1968			4.2	3.9	3.4	3.7	8.0	8.6	9.2
1969				3.5	3.0	3.6	8.9	9.5	10.0
1970					2.6	3.6	10.7	11.0	11.3
1971						4.6	14.8	13.7	13.4
1972							25.1	18.1	16.2
1973								11.6	12.1
1974									12.5

S.B. McLaughlin

Fiscal Year Ending Dec. 31	To 1967	1968	1969	1970	1971	1972	1973	1974
1968			15.5	5.6	26.5	31.1	27.8	22.8
1969				-0.2	30.5	34.7	29.8	23.5
1970					70.5	54.3	39.8	28.5
1971						42.1	29.3	20.4
1972							18.4	12.7
1973								8.5

Table 37 gives the results for five development companies for which the records go back to the period 1966-1968. It will be seen that on a year to year basis, internal rates of return are somewhat higher than the corresponding return on equity, largely because the previous year's equity is the denominator. Over the long run, three firms have consistently provided after-tax returns much higher than prevailing interest rates, and the two smaller companies, Consolidated and S.B. McLaughlin, have shown after-tax internal rates of return over a five year period well in excess of 20 percent per annum. However, the return on Bramalea for most years since about 1970 is well below the conventional mortgage rate. In general, profit rates are highly variable both between firms and over time for a given firm. All firms did very well during the period 1972-1974 and some of them (such as Consolidated) did make spectacularly high profits during that period. These are the firms whose activities were most concentrated in the provision of new housing in the Toronto market during the rapid escalation of prices in the period 1972-1974.

The implications of the above discussion may be summarized as follows. Precise knowledge of profit rates from residential land development is unattainable because private companies do not release data and development profits are not separated from other earnings. The available evidence indicates that profit rates are variable over time and between companies. All companies experienced above average return on equity over the period 1971-74, some reported very high profits for this period. The return on equity may be overstated by gains made on land sold during these years, but the internal rates of return indicate even over the period 1966-74 returns were substantially above industry averages for some companies. The rates of return on equity contain a bias of unknown magnitude due to unrealized capital gains and a subsidy component of the order of 4 points due to tax deferral schemes.

The data seem strong enough to identify a period of very high profits in the Toronto housing market between (say) 1971 and 1974. There is little evidence of excessive rates of profit on average over the period 1966-70. Thus it cannot be claimed

that there is evidence of long term restrictions on entry in the industry. The high rates of profit experienced in the later period create a presumption that output of new housing should have been expanded.[2] Whether the binding constraint was the planning approval process or the market power of developers cannot be determined from the data. Indeed it is possible that neither constraint was binding and that the rising prices were due primarily to the inelasticity of the short-run supply of new housing.

Housing Indicators

An alternative approach for assessing market performance is to observe quantities and prices directly and to judge the outcome of the market. The Economic Council (1975, ch. 4) has proposed that the performance of the housing market be partly judged on the basis of two housing indicators: average number of persons per room in a household and the average rent (cash or imputed) paid per room as a percentage of income. The former is basically a measure of per capita consumption of housing services and the latter is a measure of price of housing services relative to factor prices.

This approach represents a clear advance over the simple equation of the number of dwelling units available with the supply of housing services, since it recognizes that families may increase their well-being by occupying larger houses and that part of the rise in average rents or house prices may reflect increased house size. Nevertheless, the measures neglect several important aspects of housing quality, such as location, form of tenure, structural type and size of room. Moreover, the Economic Council of Canada imputes the monthly rent of owner-occupied housing as 1 percent of market value, but does not impute income to the owner on his equity in the house.

[2] It cannot be inferred from high average profit rates that price necessarily exceeds marginal cost, and hence that the market is allocatively inefficient, since high profits may be made on intramarginal units.

This treatment ignores the effect of interest rate changes on monthly carrying costs and understates the income of persons with substantial equity in their own homes.[3]

Table 38 shows the Economic Council of Canada's indicators for Canada as a whole and for the Toronto area for 1961, 1971 and 1974. Despite the possible biases in the level of the indicators, it is clear that over the 14 year period, Toronto residents on average have lived in conditions less crowded than the national average and that the consumption of housing services as measured by rooms per person has steadily increased.[4] Rent (Cash and Imputed) has also risen as a percentage of income, so that one must interpret the result as a shift in demand for housing services relative to the supply. Since we have seen that the income elasticity of demand for housing services is probably less than unity, the demand shift cannot be explained by rising incomes. More probably, the changing age distribution of the population has resulted in a reduced number of children per household and an increase in the relative number of young adults seeking separate living quarters.

The near constancy of rents per room in Toronto between 1971 and 1974 hides a very significant increase in the imputed cost of owner-occupied housing and a substantial decline in cash rents relative to income. In fact, the cost of housing to renters relative to their income fell by some 20 percent between 1971 and 1975, while the imputed cost of owner-occupied

[3] This second point is made by M.A. Walker (1975, pp. 33-35) who estimates that the 1971 Rent per Room as percentage of income indicator might overstate by about 0.3 percentage points the cost of housing to a family with 65% equity in its house.

[4] As stressed by Walker, the crowding index may be expressed as its reciprocal, rooms per person. Rooms per person in Toronto rose from 1.5 to 1.7 over the 14 years.

TABLE 38: SELECTED HOUSING INDICATORS

Year	Persons Per Room		[a] Rent Per Room as % of Income	
	Canada	Toronto	Canada	Toronto
1961	.74	.67	3.7	4.0
1971	.64	.60	4.2	4.5
1974	.61	.58	-	4.6[b]

Source: Economic Council of Canada, Eleventh Annual Review and Twelfth Annual Review.

- not available.

[a] Includes imputed rent on owner-occupied dwellings calculated as 1% of value per month.

[b] Estimated by multiplying the 1971 datum by ratio of the rent index (1971 base) to an index of median family incomes (1971 base). The former was the average of the rental component of the Toronto CPI and the Toronto new house price index weighted by the percentage of owner-occupied houses in Toronto in 1971 (55%).

dwellings rose by over 20 percent during the same period.[5] Again, this pattern of relative price changes is consistent with a rapid change in demand, in this case a shift toward owner-occupied housing and away from rental accommodation. Once again, it appears that the increase in numbers of persons in the 25-34 year age group is an important factor in the increased demand for family style accommodation.

On the basis of these aggregate indicators, it appears

[5] The estimated housing indicators for 1974 were calculated as follows:

Basic Data	1971	1974
Median Income, Families and Unattached Individuals, Canada[a]	$7,832	$10,993
New House Price Index,[b] Toronto	100.0	170.8
Rental Component, CPI[c]		
Canada	100.0	105.4
Toronto	100.0	112.0
Percentage Owners, 1971		
Canada[d]	51%	
Toronto	55%	

[a] Statistics Canada (13-207), Table 24.

[b] CMHC, Housing Statistics.

[c] Statistics Canada.

[d] Economic Council of Canada, Twelfth Annual Review, p. 96.

Calculations

Index of median family income for 1974 on a 1971 base: 1.4036.

Index of Rent relative to family income for 1974.

Canada: 105.4/1.4036 = 75.1

Toronto: 112.0/1.4036 = 79.8

Index of House Prices relative to family income.

Toronto: 170.8/1.4036 = 121.7

The Weighted Average of Rental and House Price Indexes, Toronto, 1974 is 102.8.

that the housing market in Toronto and elsewhere in Canada has operated so as to provide adequate accommodation to most persons. This has been recognized in studies from the Comay Commission to the Real Poverty Report (Adams, 1971) and the Fraser Institute critique of rent control (1975). All agree that the major problems lie in the provision of housing to minority groups, especially those with lower incomes. The problem "is not that there are not enough decent houses to go around; the problem is that the poor do not have enough money either to rent or to buy them".[6] The data available do not indicate that this conclusion need be revised.

Housing Mix

Much discussion of the problems of housing has concentrated, not on the number of dwelling units constructed, but rather on the composition of these dwellings by structural type, tenure and price range. These concerns are reflected in much current policy making at the provincial and federal level.[7] Common to these discussions and policy initiatives is an unsupported assumption that profit maximizing businesses will not provide

[6] Adams, et. al. (1971) quoted in Walker (1975), p. 28.

[7] "In order to steer housing production away from more expensive homes and into the low and medium price ranges, private lenders agreed with CMHC's request early in the year to limit high-ratio loans to buyers of moderately priced housing. As concern shifted from inflation to the need for increased production, this constraint was removed". (CMHC, Annual Report, 1974, p. 7).

The Ontario government's OHAP program provides a wide range of assistance in accelerating the development of new land provided the developer agrees to provide a certain number of units in designated price ranges.

the appropriate mix of housing by income class. Economic theory suggests that profit maximizing behaviour will normally lead to an appropriate level of production of all commodities, including housing, provided that all markets are reasonably competitive. Since we have shown that building is reasonably unconcentrated, we must seek another reason for the alleged failure or else conclude that the market has not failed at all.

The first question to be addressed is the definition of the appropriate housing mix. Most discussions of the issue assume the existence of an external set of standards, for example, the presence of hot and cold running water and adequate sanitary facilities, against which the housing consumption of each family can be measured. But this runs counter to the criterion of consumer sovereignty adopted by most economists. If all households are rational consumers in competitive markets, then whatever the market produces is the appropriate housing mix, in the sense that no alternative can improve the welfare of some without reducing the welfare of others. Assuming reasonably competitive supply conditions, the housing market can only fail if the poor have insufficient income to attain the level of satisfaction that those with higher incomes would wish them to have, or that the poor perversely make incorrect expenditure decisions by ignoring the benefits to be gained by higher quality housing. In either of these cases, the production of low income housing by private producers would fall short of the desirable level[8] because the price required to induce the desired level of housing purchases would be below the cost of producing new housing (including the opportunity cost of the land which is diverted away from other uses).

If the market is judged to fail due to lack of income, the

[8]By desirable level is meant a level of housing services consistent with Pareto Optimality.

real problem is that the poor have insufficient income to buy any commodities at a level judged adequate by those assessing social needs. It is not a failure of the private housing market which generates the unacceptable housing mix in this case, but rather the failure of public policy and private markets together to achieve an adequate distribution of income. If the housing problem is viewed in this light, it is clear that the private market could provide the low income housing if the budgets of the poor were appropriately supplemented. Alternatively, if incomes are judged sufficient but consumption choices are deemed incorrect, a system of incentive prices might produce the desired outcome.

An alternative explanation of the alleged failure of the private housing market to provide an adequate mix of housing is that the supply of specific types of housing has been more restricted than others. In particular, it seems clear that there are municipal incentives to restrict or block completely the construction of small, single-detached houses. For example, the minimum lot size for a single family dwelling in Mississagua is 50 feet. This regulation prevents the construction of small bungalows without garages on narrow lots. Similarly, zoning by-laws can restrict the areas in which high and medium density residential development can occur.

A final question is whether the housing market has operated in a manner consistent with broader social goals, especially those for urban form. The assertion is often made by critics of housing policies that uncontrolled development has led to urban sprawl and an excessive and irreversible consumption of agricultural land. This study has not attempted to discuss the criteria by which the rate of land conversion should be judged. What has been made clear by the analysis is that whenever the stock of raw land available for urban development is reduced, the effect will be to raise the current price of raw land and induce developers to restrict the current rate of land development and housing construction. This, of course, will lead to higher future prices of housing and probably to an upward revision of expectations of future raw land prices. Thus,

restriction on the ultimate geographical growth of an urban area must lead to higher housing prices than would be otherwise the case. Despite its obviousness, this trade-off appears to have escaped many critics of current housing policy.

Assessment of Market Performance

The conclusion implied by the discussion above is that while the Toronto housing market has been functioning well over the past ten to fifteen years, it has exhibited considerable short run instability over the past five. The total housing stock in the city has grown by 60 percent over the period 1966-1975, at annual rates which much exceed the rate of growth of the estimated population. (see Table 39). Nevertheless, the period 1972-1974 was characterized by very rapid house prices ranging up to 33 percent per year for all house transactions between 1973 and 1974 (Table 40). Simultaneously there has been a noticeable decline in rents relative to the Consumer Price Index and a significant decline in apartment starts. These rapid price increases have effected a substantial transfer of wealth away from first time purchasers of homes toward previous homeowners. The short run instability of the market has been the cause of considerable public discussion.

This short run instability is partly explained by two factors identified in Chapter 2: the inelasticity of the demand for housing and the low proportion which annual production bears to total housing stock. The former explains why sudden shifts in demand can lead to rapid increases in the price of a fixed stock, while the latter indicates that very rapid expansion of the rate of new housing production is required if the price is to return quickly to an equilibrium level. The interaction of these two factors allows a simple rationalization of the events of 1971-75. In particular, it is possible to rationalize the observed pattern of housing starts (excluding apartments) and new house prices as the result of a sharp increase in housing demand coupled with short run restrictions or inelasticity in the supply of new housing during the latter part of the period.

TABLE 39: RATE OF GROWTH OF POPULATION AND HOUSING STOCK, TORONTO CMA, 1966-1975

June 1	Estimated Population (thousands)	Percentage Change from Previous Year	Rate of Growth of Housing Stock
1966	2,290		3.8
1967	2,366	3.3	5.3
1968	2,435	2.9	6.2
1969	2,495	2.5	4.8
1970	2,567	2.9	4.8
1971	2,628	2.4	4.5
1972	2,672	1.7	4.8
1973	2,692	0.8	4.4
1974	2,741	1.8	3.3
1975[a]	2,747		2.9

Source: Statistics Canada (91-201) and Table 3.

[a]The estimate for 1975 was obtained by linear interpolation between 1974 and preliminary census data for 1976 Since the data are not comparable, no percentage change has been calculated.

TABLE 40: RATES OF INCREASE IN HOUSING PRICES, TORONTO CMA, 1967-1975

Year	CPI (Canada)	Average Value of House Sales	New House Price Index	Rental Component
	annual rates of change as percentages			
1967	3.6	7.8	-	5.2
1968	4.0	7.1	-	5.1
1969	4.6	-1.8	-	4.5
1970	3.3	4.9	-	3.4
1971	2.9	0.9	0.9	1.9
1972	4.8	4.4	10.2	1.3
1973	7.5	15.1	24.9	1.6
1974	10.9	33.4	24.7	2.8
1975	10.8	11.4	-0.5	5.9

Source: Table 5 and Statistics Canada (62-002).

This explanation is suggested by an examination of Table 41, which sets out the number of ground unit starts each year from 1970 to 1975. It clearly indicates that there were rapid increases in the rate at which new housing was being built in 1971 and 1972, but that by 1973 the rate of construction, while still high, was no longer increasing. Simultaneously the relative price of new housing remained reasonably constant until 1973, when it started to rise rapidly. It seems probable that the acceleration in house prices was associated with the deceleration in housing starts.

The analysis can be made slightly more formal by an appeal to a familiar proposition in elementary economics textbooks. If only one of the demand or supply curves is shifting, it is possible to separate shifts in demand from shifts in supply by examining the direction of price and quantity change. If both price and quantity change in the same direction, the demand curve has shifted. If price and quantity change in opposite directions, supply has shifted. The direction of the shift is the same as the change in quantity.

This proposition is easily adapted to the market for housing if the increase in the demand for housing is plotted on the same graph as the short-run supply curve of new housing, as shown in Figure 9. Here, SRS is the same curve as in Figure 6 of Chapter 2, but D refers to the annual rate of increase in the quantity of housing stock demanded at any price. As discussed in Chapter 2, the price of the housing stock remains unchanged if the flow supply of new housing precisely equals the rate of increase in demand.

Extending the preceding rule, it will be seen that a simultaneous increase in price and quantities implies a rightward shift of the rate of increase in demand curve, D. The supply curve may have shifted in either direction in absolute terms, but has definitely not shifted as far to the right as the demand curve. Similarly a simultaneous decrease in prices and flow quantities unambiguously implies a reduction (leftward shift) in demand. A decline in flow quantity supplied coupled with an increase in prices umambiguously implies

TABLE 41: CHANGES IN THE PRICE AND QUANTITY OF NEW HOUSING, TORONTO CMA, 1971-75

Year	Ground Unit Starts	% change	Relative Price of New Houses	% change
1970	8,500		102.0[a]	
1971	13,219	55.5	100.0	- 2.0
1972	18,122	37.1	105.2	5.2
1973	17,823	- 1.6	122.1	16.1
1974	12,733	-28.6	137.3	12.4
1975	15,680	23.1	123.3	-10.2

[a]1970 datum is for all house sales.

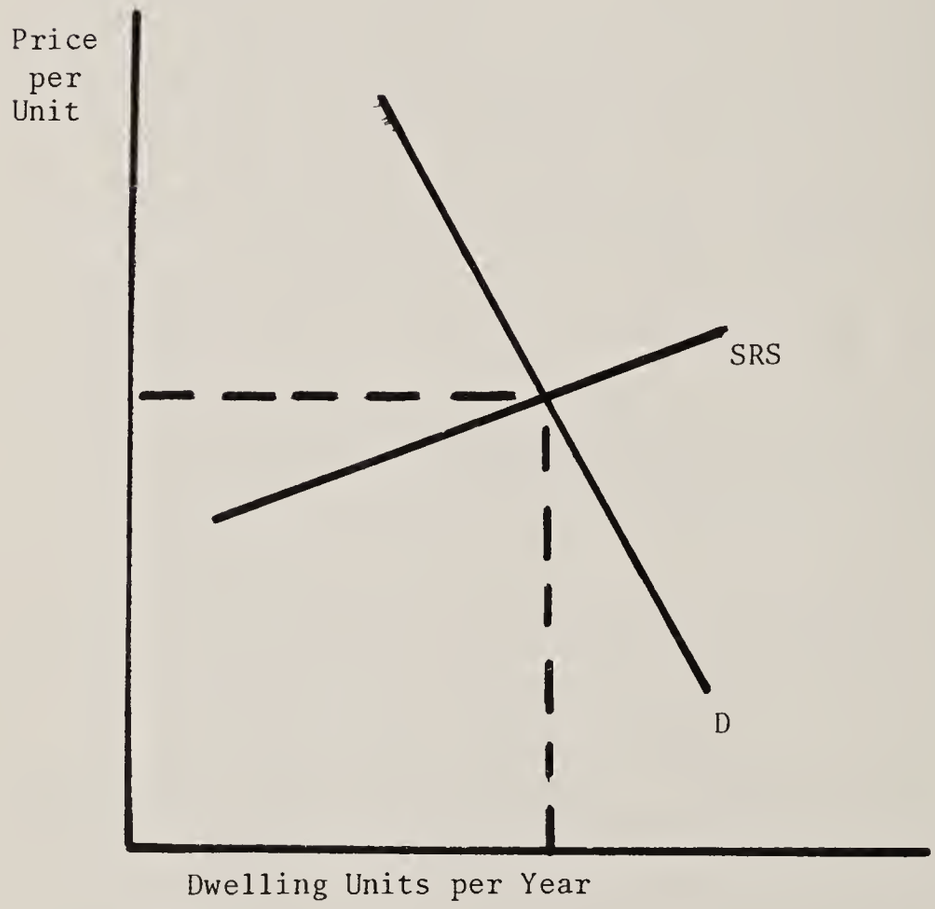
[b]relative to previous year.

Source: Tables 3 and 5.

TABLE 42: INTERPRETATION OF PRICE AND QUANTITY CHANGES, GROUND UNITS, TORONTO CMA, 1971-75

Year	Increase in Housing Stock at midyear	Direction of Change in flow supply	Relative Price of New Houses	Direction of Change in Price	Interpretation
1971	18,500		100.0		
1972	13,219	+	105.2	+	+ shift in demand
1973	18,122	+	122.1	+	+ shift in demand
1974	17,823	-	137.3	+	- shift in supply
1975	12,733	-	123.3	-	- shift in demand

FIGURE 9: DETERMINATION OF PRICE BY INTERACTION OF FLOW SUPPLY AND RATE OF INCREASE IN STOCK DEMAND



a leftward shift in supply, while demand may have shifted rightwards or leftwards by a lesser amount.

It is possible to relate, in rough fashion, the data on housing starts and new house prices, to this analysis. Table 42 sets out the necessary data. The first column is an estimate of the increase in the housing stock in the middle of the year relative to the previous year. Since there is a delay of several months between housing starts and completions, the estimated increase as of mid-year 1972 is simply the number of ground unit starts in 1971, and so on. The second column gives the direction of change in the flow quantities relative to the previous year. Columns three and four give the price of new houses relative to the Consumer Price Index and the direction of change. Finally, column five gives the interpretation based upon the above discussion.

The result of this simple exercise is to confirm the initial impression of substantial increases in demand for ground units over the period 1971-73, followed by a leftward shift in the supply of new housing in the period 1973-74. The final period, 1974-75, was marked by a decline in the flow demand for new ground units.

This interpretation of the data must be treated with caution, since the data themselves relate only approximately to the same periods of time and since market conditions changed dramatically in the middle of certain years, especially 1974. Moreover, the notion of a supply curve is imprecise at best if markets are not perfectly competitive. Nevertheless, the data do lend support to the hypothesis that a supply restriction of some sort was associated with the rapid increase in prices in 1973-74.

The implications for public policy will differ according to the explanation offered for this restriction: planning constraints or market power constraints as discussed in Chapter 2 or simply the effect of inelasticity in the short-run supply of new housing. Similarly, the notable increases in the demand for new housing in 1971-73 may be ascribed to demographic factors, changes in federal fiscal and monetary

policy or to changes in government housing policies. Once prices started to rise rapidly, however, it seems undeniable that changed expectations concerning future prices contributed notably to the increase in the stock demand. Once these expectations were disappointed, the market was dominated by reduction in the rate of growth of demand.

This study has not provided any new evidence on the causes of the demand shifts. As to the question of supply restriction, some comments can be made.

First, the hypothesis that there exists a constraint on the flow of planning approvals obtains some support from the data on time lags in subdivision reported in Chapter 3. There it was demonstrated that the mean length of time from application to building lot registration exceeded two years, and that there was no evidence of a decrease in this lag. Such data are consistent with the hypothesis that the various planning authorities have a limited capacity to process subdivision applications and that that capacity was overloaded in the period of rapidly increasing demand. Of course, it is also possible that the delays were due to short-run capacity constraints in the provision of basic services for the land under subdivision or to some other factor not directly related to the planning process. More detailed study of the rate of processing of subdivision applications might resolve the issue.

Secondly, the hypothesis that the supply restriction was due to the market power of landlords receives only weak support. The analysis of Chapter Two demonstrated that developers have only a weak incentive to collude since, despite the inelasticity of demand for housing, the presence of a large stock of houses noticeably reduces their scope for exercising market power. Moreover, concentration levels do not appear high enough to support effective tacit collusion and there is no evidence of formal collusion in the setting of prices or rate of land development. However, theoretical considerations lead one to expect a slower rate of land development by a large landholder relative to a smaller one, since the elasticity of

demand facing him is lower, and large regional concentrations of land ownership may form an effective barrier to the entry of new land developers. The data reported in Chapter 3 suggest that land holding is quite concentrated in some regions, although the largest six firms held only about 40 percent of the land in the Markusen-Scheffman sample. Despite these problems, the data in section A do not indicate prolonged periods of excess profits and thus do not support the hypothesis of market power, although they do not refute it.

Even if land is developed under less than competitive conditions in the Toronto CMA, the market power hypothesis does not explain the apparent leftward shift in the supply of new ground units in 1973-74, since there is no evidence that the potential market power of developers suddenly increased during that period.

The final hypothesis is that the restriction in flow supply of new housing in 1973-74 was due primarily to the inelasticity of the short-run new housing supply once a high level of construction activity was reached. By itself, this could not explain the reduction in housing starts in 1973, but it is conceivable that the entire curve shifted upwards due to increasing costs of labour and materials. Alternatively the adoption of a less expansionary monetary stance by the Bank of Canada may have caused the finance constraint referred to in Chapter 2 to become binding. However, if federal policy were to explain the decline in building starts in 1973, one would expect to find a similar decline across Canada. In fact, ground unit starts in urban areas rose by 16 percent in 1973.

The final assessment of the housing market's performance must ultimately be mixed. In the long run, the market has performed reasonably efficiently, as demonstrated by roughly normal profits and a general increase in the quantity of housing services consumed per family. In the shorter time period, 1971-75, the relative price of houses has first risen dramatically and then fallen indicating a short term instability that has disturbed many. This can be contrasted with a

much lower rate of increase in rents.

It has been suggested that competition in an industry may be termed effective if there is a reasonable number of firms participating in the market, if there are no significant barriers to entry and if there is no evidence of collusion. On these criteria, the new housing market must be termed workably competitive, with the caveat that continued increases in large regional land holdings might in time create an effective barrier to entry.

CHAPTER 7

POLICY IMPLICATIONS

Housing policy has been a prime concern at the federal, provincial and municipal levels for the past decade. The period of very rapid house price increases between 1972-74 contributed to the general feeling that the performance of the market was decidedly poor. The general tenor of this study is that the housing market has performed reasonably well over the past decade, although there is some reason for concern about constraints on the supply of new housing which might arise both from government action and high land ownership concentrations in certain regions.

In this chapter, current government policies are classified by their direct impact on the housing market. The analysis of Chapter 2 is then applied to predict the consequences of these programs. An overall assessment of the direction of governmental policy is made, followed by some guidelines for future policy development. The study concludes with some suggestions for further research.

Analysis of Housing Policies

As was shown in Chapter 2, the production of new housing is the result of the interaction of supply and demand in a number of closely linked markets: the stock market for housing, the flow market for new dwelling units, the market for serviced building sites and the market for the stock of raw land. The housing programs of the various levels of government have a direct impact on one or more of these markets, and an indirect effect on the stock of housing transmitted through the several markets.

It is natural to classify housing programs by the nature of their direct impact on the housing and land markets. Two broad categories stand out: policies which increase the demand for housing, serviced land or raw land at existing prices and policies which increase the quantity of new housing or serviced

land supplied at given prices. The latter may be subdivided into those affecting the supply functions of developers and builders and those affecting the constraints imposed on their operations.

1. Demand Policies

Any policy which directly reduces the price or opportunity cost of housing services to individuals increases the stock demand for housing. This is true whether the housing is owner-occupied or rented. An example of the former is the assisted home ownership program of the federal government (AHOP). Under this program, families can obtain mortgage financing of up to 95 percent of the value of a new house and may be eligible for an annual grant reducing the rate of mortgage interest. It was established in Chapter 2, that the present value of a house to an owner depended positively on the loan-to-value ratio and negatively on the rate of mortgage interest, so that both components raise the present value of a given stream of housing services to a potential buyer. Accordingly, the buyer's demand schedule shifts upwards, or equivalently to the right. The immediate effect is to raise the price of the housing stock, since supply is inelastic in the short run.

The provision of rental subsidies, as under the Ontario government's Rent Supplement Program also has as its direct impact an increase in the demand for dwelling units. Under the program, the provincial government will supplement the rent paid by lower income families to a private landlord to bring the net rent to the current market rent for equivalent accommodation. This increases the quantity of housing services demanded at any level of market rents, and thus acts to increase the overall level of rents. Higher rents raise the present value of rental building to an owner, and hence raise the price he is willing to pay for it. Once again the stock demand for housing increases.

Policies which directly increase the stock demand for housing will increase the rate at which the housing stock increases, provided there is no binding constraint on the

availability of finance for new construction or on the rate of planning approvals for new development. If there are such constraints, the higher price level for housing will have no effect on the rate of production of new housing.

Some demand oriented policies apply specifically to new housing. For example, interest subsidies under AHOP are available primarily for mortgages financing the purchase of new rather than existing houses and the Ontario Government's OHAP (Ontario Housing Action Program) and Family Rental Housing schemes apply specifically to new housing projects. In the case of assistance to homeowners, the price offered for a new house will rise relative to the price offered for an existing house, so that the price received by the supplier of new housing tends to rise. This implies a shift to the right in the demand curve for serviced building lots. In the case of rental projects for which a capital subsidy is provided the demand for serviced land shifts to the right by the amount of extra land required by the public project. Policies which give preference to new housing thus tend to increase the demand for building sites.

The effect of such policies is to increase the price and quantity of serviced land sold, unless there is a binding constraint on the rate of planning approvals. If the supply of lots is elastic, the rate of new housing production will be increased and the rate of growth in the housing stock is raised. If the supply of lots is inelastic, or if constraints are binding, the price of lots will rise, but the rate of housing construction will not increase substantially.

The final demand oriented policy available to government is municipal land banking. Under the Municipal Land Assembly program, for example, CMHC provides high loan-to-value ratio loans at reduced interest rates to municipalities wishing to assemble land for future development. The initial impact of this policy is to shift the demand for raw land, to raise its price, and consequently to raise the marginal cost and reduce the quantity of serviced land and new housing produced

during the period the land bank is being assembled and held. Thus, the short-run effect is to increase house prices. If the public authority develops the land more rapidly than would a private entrepreneur, the supply of serviced lots will be augmented, provided the constraint on planning approvals is not binding. For a more detailed analysis, see Carr and Smith (1975) who conclude that the price of land in competitive markets will be higher in the presence of land banking but that under certain circumstances the sale of public land can be used to drive down prices in imperfectly competitive markets.

2. Supply Policies

Certain government policies tend to increase the housing stock without simultaneously increasing the demand for it. These supply-oriented policies may affect the supply schedules of private producers of housing and serviced land or they may affect the constraints on building or planning approvals.

The only policies which effectively increase the flow supply of housing at given prices are the home renewal plans of the Ontario and federal governments. The federal Residential Rehabilitation Assistance Program provides partly forgiveable loans to low income families and to municipalities for the renovation of existing housing. This reduces the rate of withdrawals from the housing stock and can be considered equivalent in effect to a shift in the supply of new housing, since the net effect is to reduce the price of the housing stock.

Municipal land assembly programs increase the supply of serviced land by adding to private developers' quantities the quantity supplied through the municipal program during the period in which the land is being sold. Provided there is no binding constraint on the rate of subdivision approval, a rightwards shift of the supply of building lots will tend to decrease housing prices over time.

More important than these are policies which directly affect the position of the finance constraint on building or the planning constraint on development. For example, the direct lending portion of the AHOP program provides for direct

mortgage financing by CMHC of certain types of new residential construction. It may, therefore, represent a net increment to the funds available for mortgage lending at current interest rates and thereby increase the rate of residential construction, provided constraints on the supply of serviced lots are not binding. Since the AHOP program simultaneously increases the demand for the housing stock, the ultimate effect on prices is unclear. Other programs operating by way of the finance and planning constraints are exemplified by the cash grants provided by the provincial and federal governments to municipalities authorizing new housing or constructing new trunk utilities. The municipalities are thereby given an incentive to increase the rate at which approval may be given to land division projects. If the planning constraint is binding, programs which relax it will increase the rate of production of new housing and eventually tend to reduce the rate of increase in house prices.

Assessment of Current Policy

1. Federal and Provincial Policy

In general, federal and provincial governments appear to be relying much more heavily on demand-oriented policies than on supply-oriented ones. One indicator of such concentration is provided by the description of provincially and federally administered housing programs provided by the Ontario Ministry of Housing (1975). The programs relevant to the Toronto housing market have been tabulated as Tables 43 and 44. The major features of each program are noted, and the direct impact of the policy on housing supply or demand is indicated.

Of the 32 programs tabulated, 20 have a direct positive effect on the demand for the stock of houses. Of these, 12 also increased the demand for building sites, as did 4 other programs. The demand for raw land was increased by three more policies so that 27 of the 32 programs were at least partly demand-oriented. Only 15 policies could conceivably have a direct impact on the supply of housing or serviced land and four of these are simply the operation of the planning

TABLE 43: FEDERALLY ADMINISTERED HOUSING PROGRAMS

Program Name	For Individuals and Organizations other than Municipalities				For Municipalities		Direct Effect On Housing Market[a]						
	Income Limit	High Ratio Loans and Easier Financing	Interest Subsidies	Cash Grants and Rental Subsidies	Public Housing Subsidies	Cash Grants and Interest Subsidies	Demand Policies (1)	Demand Policies (2)	Demand Policies (3)	Supply Policies (4)	Supply Policies (5)	Supply Policies (6)	Supply Policies (7)
Federally Administered													
1. Home Owner Grants				X			X	X					
2. Assisted Home Ownership	X	X	X	X			X	X				X	
3. Private Assisted Home Ownership	X			X			X	X					
4. Home Improvement Loans		X								X			
5. Low Rental Housing Assistance (S.15 Entrepreneur)		X	X				X						
6. Non-Profit Housing Assistance		X		X			X	X					
7. Assisted Rental Housing (Privately Funded)				X			X	X					
8. New Communities Program						X			X		?		
9. Residential Rehabilitation Assistance Program	X	X		X						X			
10. Municipal Infrastructure Program						X							X
11. Insured Mortgage Loans		X					X						
12. Veteran Affairs Housing Program				X			X						

[a]Key to Policies:
(1) shifts stock demand for housing rightwards.
(2) shifts flow demand for building sites rightwards.
(3) shifts stock demand for raw land rightwards.
(4) shifts flow supply of new housing rightwards.
(5) shifts flow supply of building sites rightwards.
(6) shifts finance constraint on private builders rightwards.
(7) shifts the planning constraint rightwards.

TABLE 44: PROVINCIALLY ADMINISTERED HOUSING PROGRAMS

Program Name	For Individuals and Organizations Other than Municipalities				For Municipalities		Direct Effect On Housing Market[a]						
	Income Limit	High Ratio Loans	Mortgage Interest Subsidies	Cash Grants and Rental Subsidies	Public Housing Subsidies	Cash Grants and Interest Subsidies	Demand Policies			Supply Policies			
							(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Ontario Housing Action Program (OHAP)	X	X	X			X	X	X					X
2. Family Rental Housing (Geared to Income)	X			X	X		X	X					
3. Senior Citizen Housing (Geared to Income)	X			X	X		X	X					
4. Rent Supplement Program	X			X	X		X						
5. Accelerated Family Rental Housing		X			X		X	X				X	
6. Community Integrated Housing		X					X					X	
7. Modified Federal/Provincial Rental Housing					X		X	X					
8. Wigwamen					X		X						
9. Student Housing		X					X						
10. Elderly Persons Housing Aid				X				X					
11. Lot Lease Program	X	X	X				X	X					
12. Condominium Housing	X	X	X					X				X	
13. Community Sponsored Housing		X		X				X					
14. Municipal Land Assembly						X			X		?		
15. Neighbourhood Improvement Program						X		X		X			
16. Official Plans Approval													?
17. Subdivision and Condominium Approvals													?
18. Monitoring of Consent and Minor													?
19. Review of Zoning Bylaws													?
20. New Towns									X		?		

[a]For key, see Table 43.

agencies which now review all subdivision and official plans. Four policies seem to imply a relaxation on the financing constraint for new building, while only two, the federal Municipal Infrastructure Program and the provincial OHAP program, appear to be directly aimed at removing constraints in the flow supply of building sites due to the planning process.

The two objectives of federal and provincial policies are apparently to increase the consumption of housing services by specified groups, especially those on low incomes, senior citizens, and families with children, and to increase the housing stock generally. The first objective appears to be of overriding importance in the official descriptions of program objectives.

Demand-oriented policies will result in a substantially increased housing stock only if the supply of new housing is relatively elastic and if there are no finance or planning constraints on the rate of subdivision and construction. If supply is inelastic or if constraints are binding, demand-oriented policies act primarily to drive up the price of the housing stock. Because cash grants and interest subsidies are available primarily to lower income families, their consumption of housing services relative to other groups may rise, but their consumption of housing services in absolute terms may not be increased by as much as it would had more supply-oriented policies been followed.

In retrospect, it appears that demand-oriented policies of both levels of government exacerbated the growth in demand for housing which stimulated the speculative boom of 1972-1974. Thus they may have done more harm than good. In addition, the speculation was fueled by a continuing high rate of increase in house prices. This rate of increase might have been moderated if more approvals of plans of subdivision had been forthcoming in 1973 and 1974.

2. Municipal Policy

Municipalities play a major role in providing the

planning approvals that are such essential inputs into the production of new housing. By official plan and by zoning by-law, municipalities can substantially affect the composition of residential land development and subsequent housing mix. By control over the rate of installation of essential trunk services, municipalities affect the overall quantity of development which may be permitted.

Over the past five years, municipalities have greatly increased the tax or impost which they impose upon new land development. Originally a means of financing essential physical and social services, imposts now exceed $1,500 per lot in some regions.[1] It appears that in at least some Ontario communities, cash imposts are treated as sources of general revenue (Clayton Research Associates, 1973). High lot levies have been cited as important factors in high development costs by HUDAC (1975, pp. 110, 170). In addition, it is claimed that municipalities have an incentive to impose particular standards for streets and sewers, since they are not responsible for installation of these services but are responsible for future maintenance. (HUDAC, 1975, p. 165).

In times of rapidly increasing demand for housing when a constraint on planning approvals is binding, municipal levies and standards may be raised without immediately affecting the price paid by purchasers. Figure 7(b), page 49, shows that the average revenue per lot sold under these conditions will exceed the marginal cost of the development. Levies and extra development costs of up to the entire difference ($AB/lot in Figure 7(b)) may be imposed without increasing the price of serviced

[1] For example, the Town of Mississauga imposed in 1974 a levy of $250 for city purposes and $150 for regional purposes for each person per dwelling unit. The total levy was computed using an assumed population density for each type of residential structure. For example, for single-detached, semi-detached and townhouses with gross floor area in excess of 1,150 square feet, a population of 4.2 persons per unit was assumed, yielding a total levy of $1,680. This was to be indexed by the Southam Construction Index.

lots. However, high imposts and development charges represent an increase in marginal cost which shifts the long run supply of serviced land upwards and raises the equilibrium price. This in turn raises the long run supply curve of new housing and leads to an increase in the long run equilibrium price of housing.

High municipal levies and standards probably did not contribute significantly to the boom in house prices of 1972-74. However, they do represent a factor which will reduce the rate at which house prices will decline subsequent to the boom.

Recommendations for Future Policy

In the previous chapter, the performance of the Toronto housing market was characterized as good over the long term but poor over the short. Future housing policy should be directed at maintaining the first characteristic while avoiding the second.

The reasonably good long-run performance of the market may be explained by its effectively competitive nature. Previous chapters found low concentration in building and only moderately high concentration in land development. Provided land ownership is not excessively concentrated, barriers to entry are low. No collusive activity by developers or builders is evident. Future policy should be directed at maintaining these characteristics.

The short-run instability demonstrated in 1972-74 appears to have been touched off by a combination of demographic developments, monetary policy and federal and provincial housing policies which accelerated the rate of growth in demand beyond the capacity of builders, developers and the municipal planning system to increase supply. The consequent rapid increase in prices stimulated a speculative boom which collapsed in 1974. Future policy should be directed at ensuring that the capacity of the municipal planning system to review new subdivision applications is consistent with the rate at which they are expected to be received, with a substantial margin of safety to accommodate short-run fluctuations in

demand. Moreover, long-run plans for trunk sewerage and water supply should be implemented sufficiently far ahead of expected development so that a temporary rapid increase in the rate of application for subdivision approval can be accommodated.

Although this study has not found that market power has contributed to the short-run instability of the housing market, it has found quite high concentration in apartment building and land subdivision in some regions within the Toronto CMA. Since land ownership concentration is the main potential barrier to entry to the market, it is clear that government policies should not encourage further concentration. The effects of such legislation as the Land Speculation Tax in forcing integration of land development and building should be investigated in more detail.

These principles may be summarized in four rather negative guidelines for public policy:

(a) Avoid Demand-Oriented Policies when Supply is Constrained.

Policies which increase stock demand for housing when supply constraints are binding cannot be anything but counter-productive.

(b) Avoid Unnecessary Constraints on Supply.

The municipal planning process in all probability contributes to the development of attractive and desirable new communities. Certainly it should not be abandoned. But where possible it should be simplified, and in particular potential bottlenecks should be identified and eliminated.

(c) Avoid Raising the Marginal Cost of New Housing.

High municipal standards and lot levies contribute to a high equilibrium price for housing. Efforts should be made to choose the economically most efficient standard for servicing and to restrict lot levies to approximately the true increase in social costs generated by residential growth.

(d) Avoid Growth in Market Concentration

High regional concentrations in land ownership and development may reduce the rate at which serviced land is supplied for new development. This constraint may be particularly evident in times of reduced demand, when large land developers may avoid

price cutting as a method of reducing their inventory of serviced lots. This delays the rate at which the market can return to an equilibrium level of prices and output after rapid increases in price. However, the market power disadvantage of high regional concentrations may be partially offset by gains in the quality of planning at the scale of new communities, so that caution should be exercised in insisting upon deconcentration.

Directions for Further Research

Two major conclusions of this study are that market power in the house-building portion of the new residential housing market is not a problem and that constraints on the supply of planning approvals may have accentuated the short-run instability observed in 1972-74. Two major areas of concern remain: the exact nature of the constraint on planning approvals and the nature and extent of market power in land development. Future housing research should concentrate on these issues. In particular, four research projects appear both feasible and important.

1. Analysis of Planning Approvals, 1969-1976

The files of the Ministry of Housing contain sufficient data to illuminate greatly the nature of planning constraints on the flow supply of serviced land. This study has been able to make only superficial use of them. A more intensive study would clearly distinguish the stages of application, draft approval, final approval and building lot registrations. The hypothesis that there exists a relatively fixed rate at which draft approvals are made could be tested by relating the length of time from application to draft approval to the backlog of applications. The hypothesis that planning constraints rather than market power constraints were binding in the period 1972-74 could be tested by testing for a decline in the rate of subdivision application before the shift in market demand in 1974. The increased length of time between application for subdivision and registration of building lots observed in 1974

and 1975 could be analysed and ascribed either to prolonged bureaucratic procedures or to decisions by developers. Similarly, variations in the backlog of applications and in the average duration of application could be investigated with the goal of determining whether increased durations were primarily due to increased governmental processing of applications or to an increased volume of work.

2. Trends in Concentration, 1969-76

This study has identified two important sources of information of concentration in the housing market: the subdivision data of the Ministry of Housing and the building permit data of the municipalities. An important issue which could be resolved using this data is whether concentration has in fact increased over the past seven to ten years. The analysis would be comparatively simple and cheap, and would help in deciding the desirability of an active policy to reduce concentration.

3. Economies of Scale in Residential Land Development

The concentration data of Chapters 3 and 4 revealed that a large proportion of total land development was accomplished by firms of very large size in terms of building lots, although a substantial share of the total was still accounted for by smaller firms. Detailed information on the sources of economies of scale in land development are needed. It could best be supplied by an estimate of economies of scale performed by a firm of consulting engineers actively engaged in residential development work. Estimates of the total cost and total revenue of developing land at various scales, ranging from 50 or so lots to 1,600 or more should be made and the sources of economies of scale identified. If possible, this should be complemented by the study of the same cost components in actual developments of various sizes.

Engineering estimates of economies of scale in land development are essential in determining the desirability of allowing high regional concentration in land ownership.

4. Concentration and the Speed of Development

The main hypothesis concerning market power in the context of land development is that it results in a slower rate of land development. As pointed out earlier, quantitative measures of concentration in land ownership and development can be constructed from available data. Active consideration should be given to a project which would develop quantitative estimates of the effect of concentration on land development rates. Careful consideration would need to be given to the appropriate measure of speed of land development and to a model which identified the firm's choice of timing. Again, the conclusions of this study would contribute to the development of a rational policy concerning concentration in land development.

Summary and Conclusion

In this study the market for new housing has been investigated. Chapter 1 introduced the Toronto Census Metropolitan Area as the appropriate geographic area of analysis and discussed the major characteristics of the market. Chapter 2 introduced an analytic framework in which the problems of market structure and public policy could be analysed, paying careful attention to the interrelationships between the stock and flow markets for housing and the associated markets for serviced and raw land.

In Chapter 3 the housing production process was analysed and conditions of supply in the major input markets were investigated. Data on the distribution of subdivision approvals and building permits by size of plan and size of firm were used to investigate questions of economies of scale, and it was concluded that most economies of scale could be realized by firms producing only a small fraction of total output.

In Chapter 4 further attention was given to the structure of the market, particularly to the role of the largest firms and to the extent of concentration. Data on the share of the largest developers and builders in the

Toronto CMA and subregions were developed and presented. Although concentration appears low in the Toronto CMA as a whole, concentration in some subregions was considerably higher.

Chapter 5 reviewed the limited information available on market conduct while Chapter 6 assessed the performance of the market. Profits and housing indicators indicate that the long run performance of the market has been quite good, but that serious instability developed in the period between 1972 and 1974. The instability was ascribed to speculation touched off by rising demand interacting with supply constraints.

Chapter 7 has found government policy to have been generally overconcerned with increasing the demand for the housing stock and too little concerned with the presence of supply constraints. Future policy should avoid exacerbating demand increases and maintain flexibility in the rate of planning approvals. Some suggestions for future research terminated the study.

This study opened by noting contrasting opinions about the performance of Canadian housing markets. After examination of the issues it has arrived at a middle ground, but one which on the whole supports the view expressed by Smith. The Toronto market has experienced a period of pronounced price instability. But, on the whole, it gives evidence of being able to perform well, given sufficient time and the avoidance of excessive market power.

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APPENDIX A
THE RELATION BETWEEN RENTAL AND CAPITAL VALUES

The relation between the value of the housing services yielded by a property and the capital value of that property depends on the opportunity cost of capital to the purchaser, on the rate of mortgage interest and the ratio of mortgage loan to capital value, and on the regulations governing the taxation of rental income. The value of a given property to an owner occupant will in general differ from the value of the same property to an investor, even if mortgage interest and the opportunity cost of capital are the same for both.

Use the following notation:

r_t rent per year at time t

c_t operating costs per year at time t

a_t fraction of original value of the building available as capital cost allowance at time t

m marginal tax rate

i_1 mortgage interest rate

i_2 opportunity cost of capital

ℓ ratio of mortgage loan to capital value of the property (the 'leverage ratio').

The rent, r_t, and operating costs, c_t, are assumed to be market independent of the form of tenure. By purchasing the property rather than renting it, an owner occupant saves $\$r_t$ per year but incurs operating costs and mortgage interest payments. Denoting the capital value of the property to the owner occupant by V_o, the benefit at time t is

$$f_t = r_t - c_t - i_1 \ell V_o$$

Denote the present value of net rentals by P.

$$P = \int_0^\infty e^{-i_2 t} (r_t - c_t)\, dt$$

The present value of the savings to the owner occupant is

$$F = \int_0^\infty e^{-i_2 t} f_t dt$$

$$= P - (i_1/i_2)\ell V_o$$

The maximum price an owner occupant will be willing to pay for the property is that for which the present value of savings, F, equals the initial investment, $(1-\ell)V_o$. This occurs when

$$F = P - (i_1/i_2)\ell V_o = (1-\ell)V_o$$

This equation may be solved for V_o, yielding

$$P = \left(\frac{\ell i_1 + (1-\ell) i_2}{i_2}\right) V_o$$

(A-1)

$$V_o = (i_2/i_3)P$$

where $i_3 = \ell\, i_1 = (1-\ell) i_2$ is the average of the mortgage interest rate and the opportunity cost of capital weighted by the loan to value ratio, ℓ.

A similar relation may be obtained for the value of the property to an investor, V_1. For the investor, annual cash flow from the property, g_t, equals net rentals after tax less mortgage interest plus any reduction in tax obtained from capital cost allowances. This reduction is equal to the amount of the allowance ($a_t V_1$) times the marginal tax rate. Since mortgage interest is tax deductible, cash flow is

$$g_t = (1-m)(r_t - c_t) - (1-m)\, i_1 \ell V_1 + m\, a_t V_1$$

The present value, G, of this time stream is given by

$$G = \int_0^\infty e^{-i_2}\, g_t dt$$

$$= (1-m)P - \frac{(1-m)\ell i_1 V_1}{i_2} + m V_1 \int_0^\infty e^{-i_2 t} a_t dt$$

$$= (1-m)P - \frac{(1-m)\ell i_1 V_1}{i_2} = mV_1 S$$

where V_1 is the capital value to the firm, P is the present value of net rentals defined above and S is the present value of the stream of capital cost allowances for an investment of one dollar. For future reference, note that if capital cost allowances can always be used to offset other income and the allowable rate is 100δ percent of the undepreciated value of the property, a_t can be written explicitly as $a_t = e^{-\delta t}$, and the value S becomes

$$S = \int_0^\infty e^{-i_2 t}\, \delta e^{-\delta t} dt$$
$$= \delta/(i_2 + \delta)$$

The maximum value of the property to an investor, V_1, is given by the equation

$$G = (1-m)P\ell(1-m)(i_1/i_2)V_1 + mSV_1 = (1-\ell)V_1$$

which can be solved to yield

$$V_1 = \frac{(1-m)P}{[\ell(1-m)i_1 + (1-\ell)i_2)/i_2 mS]}$$

(A-2) $$V_1 = (1-m)P/(i_4/i_2 - mS)$$

where $i_4 = \ell(1-m)i_1 + (1-\ell)i_2$ is the average of the <u>after tax</u> rate of mortgage interest and the opportunity cost of capital weighted by the leverage ratio, ℓ. Note that a positive capital value implies i_4/i_2 exceeds mS.

In the case in which no capital cost allowance is allowed, S = 0, and we have

(A-3) $$V_2 = (1-m)(i_2/i_4)P.$$

The fact that imputed rents received by owner occupants escape income tax gives an advantage to owner occupants, but this may be offset by a sufficiently generous capital cost allowance. This may be seen by comparing V_2, the value of the

property to an investor in the absence of capital cost allowances, with V_o, the value to the owner occupant.

$$\frac{V_2}{V_0} = \frac{(1-m)(i_2/i_4)}{i_2/i_3}$$

$$= (1-m)\ i_3/i_4$$

From the definition of i_3 and i_4,

$$(1-m)i_3 - i_4 = (1-m)\ell i_1 + (1-m)(1-\ell)i_2 - (1-m)\ell i_1 - (1-\ell)i_2$$

$$= -m(1-\ell)i_2$$

$$< 0$$

so that $V_2 < V_0$ and the property is always more valuable to the owner occupant. However, when capital cost allowance is available, the investor may outbid the owner occupant. Comparing V_o to V_1 (the value with capital cost allowance) we have

$$\frac{V_1}{V_0} = \frac{(1-m)i_3}{(i_4/i_2 - mS)i_2}$$

$$= \frac{(1-m)\ i_3}{i_4 - mi_2 S}$$

Comparing numerator and denominator we have

$$(1-m)i_3 - i_4 + mi_2 S$$

$$= -m(1-\ell)i_2 + mi_2 S$$

$$= mi_2(S + \ell - 1)$$

Thus the ratio V_1/V_0 exceeds unity if and only if $S > 1-\ell$. As noted above, in the special case of complete capital cost offset $S = \delta/(i_2 + \delta)$ and the condition becomes

$$\frac{\delta}{i_2 + \delta} > 1-\ell$$

This may be written as

$$\ell > i_2/(i_2 + \delta)$$

$$\delta > i_2(1-\ell)/\ell$$

or $$i_2 < \delta\ell/(1-\ell)$$

Assuming values of .10 for i_2 and .8 for ℓ, the property is more valuable to the investor if the rate of capital cost allowance exceeds 2.5%. Alternatively, assuming a value of .05 for δ and .8 for ℓ, the investor outbids the owner occupant provided the common opportunity cost of capital is less than 20% per annum. Finally, for values of.10 and .05 for i_2 and δ respectively, the investor will outbid the owner occupant whenever the leverage factor, ℓ, exceeds .67. These examples suggest that the owner occupant will typically be outbid.

Equation (A-2) can also be used to investigate the effect on capital values of changes in capital cost allowances, leverage ratios or marginal tax rates. By straight forward differentiation in the special case of unconstrained capital cost allowance, it can be seen that capital values increase with higher rates.

$$\frac{\partial V_1}{\partial \delta} = \frac{(1-m)P}{(i_4/i_2 - mS)^2} \frac{\partial S}{\partial \delta}$$

$$= \frac{(1-m)P}{(i_4/i_2 - mS_1)^2}\left(\frac{i_2}{(i_2 + \delta)}\right)$$

$$> 0$$

To investigate the effect of changes in ℓ, note first that $i_4 = \ell(1-m)i_1 + (1-\ell)i_2$ and that i_1 is assumed less than i_2.

Therefore $\frac{\partial i_4}{\partial m} = -\ell i_1 < 0$ and $\frac{\partial i_4}{\partial \ell} = -i_2 + (1-m)i_1 < 0$

Using these results, it can be seen that in all cases, increased

leverage increases capital values, since

$$\frac{\partial V_1}{\partial \ell} = - \frac{(1-m)P}{(i_4/i_2 - mS)^2} \frac{\partial i_4/\partial \ell_1}{i_2} > 0$$

Increases in marginal tax rates normally increase the value of an income property to an investor, provided accounting losses on the property can be used to offset other income.

$$\frac{\partial V_1}{\partial m} = \frac{P}{(i_4/i_2 - mS)^2} \left[-m\left(\frac{i_4}{i_2} - mS\right) - \frac{(1-m)}{i_2} \frac{\partial i_4}{\partial m} + (1-m)S \right]$$

$$\operatorname{sgn}\left(\frac{\partial V_1}{\partial m}\right) = \operatorname{sgn}\left[-m\left(\frac{i_4}{i_2} - mS\right) - \frac{(1-m)}{i_2} \frac{\partial i_4}{\partial m} + (1-m)S \right]$$

$$= \operatorname{sgn}\left[-mi_4 + i_2 m^2 S + (1-m)\ell i_1 + i_2(1-m)S \right]$$

This expression is certainly positive for all S if it is positive for S equal to zero. But if S equals zero, substitution of the definition of i_4 leads to

$$\operatorname{sgn}\left(\frac{\partial V_1}{\partial m}\right) = \operatorname{sgn}\left[(1-m)^2 \ell i_1 - (1-\ell)mi_2 \right]$$

The sign is positive if

$$i_1/i_2 > m(1-\ell)/(1-m)^2$$

For typical values of m and ℓ (say 50% and 80% respectively) the condition will hold if the mortgage interest rate exceeds 40% of the opportunity cost of capital.

To summarize, the capital value of a property to an investor rises with increases in the allowable rate of depreciation, with the ratio of mortgage loan to property value and, in most instances, with an increase in the marginal tax rate of the investor.

APPENDIX B
PROFIT MAXIMIZATION FOR A MYOPIC HOUSEBUILDING CARTEL

Suppose that a cartel of all housebuilders in a market has been formed. By restricting output, the cartel can increase profit by raising the current price of the housing stock. The longer the period over which output is restricted, the smaller will be the stock at the end of the period and the higher will be the price of the stock. Assume the cartel wishes to maximize current profits, i.e. profit earned within the year.

Notation

p	price of houses in \$/dwelling.
Q_o	stock of houses at the beginning of the year.
q_c	competitive output over the year.
Q	stock of houses at the end of the year.
q	cartel output over the year.
η	constant price elasticity of demand for the housing stock expressed as a negative number.
$C(q)$	total cost function for housing.
β	ratio of cartel output to final stock (q/Q).

The demand for the housing stock at the end of the year is given by

$$p = aQ^{1/\eta} \qquad a > 0$$

We conceive of the cartel as producing output over the year and selling it at year's end.

Cartel profits are given by

(1) $\pi = pq - C(q)$.

The cartel maximizes profit subject to the constraint that q be non-negative. If q is positive, the well-known first order conditions for a profit maximum are

(2) $$\frac{d\pi}{dq} = p + q\frac{dp}{dQ}\frac{dQ}{dq} - \frac{dC}{dq} = 0$$

Hence, since $dQ/dq = 1$,

(3) $$p\left[1 + \frac{q}{Q}\frac{Q}{p}\frac{dp}{dQ}\right] = \frac{dC}{dq}$$

But the elasticity of demand for the housing stock is $\eta = (p/Q)(dQ/dp)$, so that the condition becomes

(4) $$p(1+\beta/\eta) = dC/dq$$

Denoting marginal cost of dC/dq by C', we have

(5) $$p = C'(\eta/(\eta+\beta)); \qquad \eta \neq -\beta$$

For a positive price we require $\eta/(\eta+\beta) > 0$, which implies $\beta < |\eta|$. Since β is of the order of .05, this will normally hold.

Substitution of equation (4) into the demand function yields an equation which implicitly determines output as a function of the the elasticity of demand.

(6) $$Q^{1/\eta} = a^{-1}C'(\eta/(\eta+\beta))$$

It would be possible to compute values of q and p which would prevail for alternative values of η and alternative assumptions about marginal costs. To compare with a competitive equilibrium it is necessary to assume rising short-run marginal costs in housebuilding.

APPENDIX C

MUNICIPAL DATA ON HOUSING SUPPLY POTENTIAL WITHIN THE TORONTO CMA

The consulting firm of Coopers and Lybrand was engaged by the Ontario Economic Council to provide certain background information for the present study. As part of their work, Coopers and Lybrand developed data on the estimated housing development potential within the Toronto CMA. These data are presented as Table C-1. The following guide to their interpretation is drawn from their report to the Ontario Economic Council,(1976,p. 4-7).

"Data obtained from the local municipalities concerning additional housing unit potentials as at December 31, 1975 are summarized in Table 1. Although this data is probably the best that is presently available, it has severe limitations, and for a proper appreciation of the data problem reference should be made to detailed footnotes on the source and derivation of the data.

"The municipal land data was summarized under categories that roughly correspond to the development process as follows:

Draft or final subdivision approval	Land controlled by developer at the final stage of the development process before building commences when a plan of subdivision has been developed and a formal application has been made for approval of registration of individual lots at land title offices.
Proposal for subdivision	Land controlled by developers in respect of which subdivision is still tentative and formal application for approval has not been submitted.

Zoned land	Land controlled by developers or others zoned for residential development by the local municipality but for which no proposals or application for subdivision approvals have been submitted.
Official Plan designated land	Land controlled by developers and others not yet zoned for residential use but intended for residential use under the local official plan.
Proposed Plans for Redevelopment	Land included in Proposed Plans for Redevelopment represents land owned by developers and others including small private users where planning studies prepared for government indicate redevelopment for residential use is desirable.

"Draft and Final Subdivision Approval

Throughout the Toronto CMA as of December 31, 1975 there were some 56,000 units with either draft or final subdivision approval status. More than half of these units - nearly 35,000 - were in the Peel Region part (Sector B) of the CMA, specifically the City of Mississauga and the City of Brampton. The towns of Ajax and Pickering reported just over 10,000 units in this category. The only other noteworthy concentration of such units was in Metropolitan Toronto, in particular in the Borough of North York (+ 3,500) and Scarborough (+ 3,300 units).

"Proposals for Subdivision

Proposed plans of subdivision which had yet to pass even the draft approval stage accounted for about 93,000 potential dwelling units throughout the Toronto CMA. Again in this category, the largest concentration of units reported was for the Region of Peel (+ 44,300 units) and specifically the City of Mississauga (+ 13,700 units) and the Borough of Etobicoke (+ 9,400 units). That part of the Region of York which is in the CMA recorded more than 12,000 units in this category, most notably the towns of Markham, Richmond Hill and Newmarket each with about 3,000 units.

One of the major obstacles in moving land from this stage to the subdivision stage is lack of services and the delays can be substantial, in many cases five years or more.

"Zoned Land

Throughout the Toronto CMA, some 2,100 acres of land was identified as vacant, zoned, residential land in respect of which subdivision plans had neither been approved nor proposed. At say 4 to 5 units per acre, (an appropriate estimate given the actual zoning), these lands could potentially accommodate around 10,000 units, about 8,000 of which were identified for the Town of Caledon in the Region of Peel. In addition to the acreage figure under this heading cited above, the Borough of Scarborough estimated that existing zoned but undeveloped land was expected to accommodate additional dwelling units totally close to 19,000 units.

"Official Plan Designated Land

Land designated on official plans for residential development but supposedly not included under zoned land or any of the other unit headings already discussed ranged between 8,700 and 13,000 acres. If development of these lands were to proceed at an average density of 10 units per acre, (an appropriate estimate recognizing development can range from estate residential to multi-family apartment), the potential additional units range between 87,000 and 133,000.

The survey of the municipalities yielded a theoretical estimate of toal potential additional housing units in the

Toronto CMA which basically reflects current plans and thinking ranging between 218,000 and 375,000 units. Assuming an average occupancy of 3.0 persons per unit, the additional population which potentially could be accommodated by those units would be of the order of 950,000 or 1,125,000 persons. Growth of that order would raise the total CMA population to around 3.8 million persons a level not likely to be reached for at least another 20 to 25 years assuming growth in future years averages between 40,000 and 50,000 persons per year. Lack of servicing and other problems such as extremely high municipal levies (imposed as a condition of subdivision approval) prevent most of this land from being physically or economically usable at this time. Heavier government expenditures on services and a willingness to reduce levies could accelerate the availability of this land for housing.

"Projected Plans for Redevelopment

Potential housing units under this heading for the entire CMA ranged between 53,200 and 64,200 units, depending on the assumed density of redevelopment. The distribution of such units is confined to Metropolitan Toronto and in particular to the City of Toronto and the Borough of York where the maturity of existing development in certain instances gives rise to the needs and opportunities for redevelopment."

The authors of the Coopers and Lybrand report were careful to advise caution in interpretation of their data.

"Data Developed Not Accurate

From our work in trying to obtain land inventory data both from the municipal sources and from private development companies through the questionnaire approach, we have reached certain conclusions about the validity and the usefulness of existing data sources and are in a position to make certain broad recommendations regarding the possible approaches to obtain better data in the future.

Our study was restricted to the Toronto CMA and the work was done on a very minimal budget considering the scope of the task. When called upon, municipal planners responded to the requests for data to the best of their ability at the time.

Many of the planners, in the absence of recent research were forced to rely on old data and make on the spot type updatings and estimates. Even those cases where the planners requested more time and a call back was made, the accuracy of the data supplied may not have been much better. This is no criticism of the planners and their departments per se, for the demands of their daily activities simply do not allow them to keep and constantly update the type of data requested of them in this survey.

Even with the high degree of cooperation in the relatively limited area, we were unable to assemble the data base that in our view is of sufficient reliability to permit important government policy decisions to be based thereon.

The data that has been assembled is at best useful in gaining some very general understanding of the land available in the Toronto CMA for residential development, but is based on so many estimates that it should not be used by the Government to make important policy decisions. More importantly, nowhere in the survey of municipalities was the data on residential land inventories which was supplied related in any way to the availability of necessary services. Thus it was not possible to make the important analytical distinction between short or near term supply and long term supply.

While the gross figures on land ultimately available may show an adequate supply for the long term, there may be a shortage of land in the short term because roads, services, zoning and other approvals are not available so that the land can be brought through the final stages of development, sub-divided and used to build housing. It is not sufficient merely to have quantitative information on gross land available but it is essential that qualitative information also be available indicating when the land will be usable. The necessary data was not available to arrive at meaningful estimates as to when the land inventory would be ready for use. This is critical information and is needed to form an assessment as to whether or not the present land inventory is adequate.

From our limited activities it became obvious that it would likely prove extremely expensive to produce reliable statistics on land inventory at least initially. Before considering the appropriate method of developing reliable land inventory information, it is worthy to consider the importance of such data to government policy matters.

"Accurate Data Needed to Develop Policy

It is readily apparent that the Government could increase the supply of land for housing for earlier use by making a greater investment in servicing and/or changing the development approval procedures so that delays at the municipal level which retard the building of housing are reduced significantly. The implementation of such policies would accelerate expenditure on housing both by early investment by the Provincial Government in Services and possibly by the Provincial Government advancing funds to Municipalities so that, they, in turn, could accelerate their expenditures and make it possible for land to reach the market earlier. Acceleration of expenditures could involve a very significant cost and the Government should have adequate information available to insure that the acceleration of expenditures and the required allocation of funds now for housing is a justified priority."

TABLE C-1: TORONTO CMA, ESTIMATED HOUSING DEVELOPMENT POTENTIAL*
AS AT DECEMBER 31, 1975

	DRAFT OR FINAL SUBDIVISION APPROVAL		PROPOSALS FOR SUBDIVISION		ZONED LAND		OFFICIAL PLAN DESIGNATED LAND	PROPOSED PLANS FOR REDEVELOPMENT
	Units	Acres	Units	Acres	Acres	Units**	Acres	Units
Total Toronto CMA	56,150	N/A	93,272-93,784	N/A	2,143	18,928	8,683-13,319	53,198-64,216
Sector A: Metropolitan Toronto	9,316	N/A	30,572-31,084	N/A	8		-	53,198-64,216
City of Toronto	990(1	13(2	4,200(3	47(4	8(5		-	35,859-45,934(6
Borough of North York	3,551(1	103(2	13,742(3	537(4			-	-
Borough of Scarborough	3,340(1	N/A	-	-		18,928(2	-	-
Borough of Etobicoke	-	-	9,414(1	760(2	-		-	2,710(3
Borough of York	1,435(1		3,216-3,728(2	N/A	-		-	14,629-15,572(3
Borough of East York	-	-	-	-	-		-	-
Sector B: Region of Peel (Part)	34,790	5,378	44,331	5,136	1,600		2,282-6,918	-
City of Mississauga	19,737(1	2,052(2	34,902(3	3,376(4	-		2,282-6,918(5	-
City of Brampton	15,053(1	3,326(2	9,029(3	1,660(4	-		-	-
Town of Caledon (Part)	-	-	400(1	100(2	1,600(3		-	-
Sector C: Region of York (Part)	352		12,350	N/A	355		4,676	-
Town of Markham	-	-	3,000(1	N/A	-		-	-
Town of Richmond Hill	-	-	3,017(1	N/A	-		90(2	-
Town of Newmarket	210(1	-	3,229(2	N/A	100(3		750(4	-
Town of Vaughan	-	-	1,020(1	275(2	-		2,750(3	-
King Township	-	-	1,584(1	792(2	198(3		854(4	-
Town of Aurora	142(1	-	500(2	N/A	20(3		70(2	-
Town of Whitchurch-Stouffville	-	-	316(1	53(2	37(3		162(4	-
Sector D: Region of Halton (Part)	1,623	267	4,488	665	60		625	-
Town of Oakville	74(1	10(2	2,183(3	335(4	60(5		-(6	-
Town of Halton Hills	304(1	25(2	805(3	80(4	-		625(5	-
Town of Milton (Part)	1,245(1	232(2	1,500(3	250(4	-		-	-
Sector E: Region of Durham (Part)	10,069	N/A	1,531	266	120		1,100	-
Towns of Ajax and Pickering	10,069(1	N/A	1,531(2	266(3	120(4		1,100(5	-

Source: Coopers and Lybrand (1976).

TABLE C-1 FOOTNOTES

N/A - Not Available.

*Note: Every effort has been made to eliminate double counting of units. Available data do not in every instance permit units to be split by column and, therefore, column totals should only be viewed as rough approximations.

**These units are not included in acreage figures

City of Toronto

1. Data supplied by Planning Department.
2. Acreage based on 75 apartment units/acre.
3. Klein and Sears Core Area Housing Study:
   a) Approximately 1,200 units proposed in other developments.
   b) Approximately 3,000 units committed or proposed for neighbourhoods in study area.
4. a) 1,200 units at 175 units/acre = 7 acres.
   b) 3,000 units at 75 units/acre = 40 acres.
5. a) Proposed residential development of 337 units in form of infill - at 50 units/acre = 7 acres.
   b) One apartment building - one acre at 50 units/acre = 50 units.
6. a) Klein and Sears Core Area Housing Study:
      i) 146 acres in commercial areas at 150 - 200 units/acre = 21,900 - 29,200 units.
      ii) 91 acres in industrial/warehousing and waterfront areas of the core = 6,825 - 9,100 units.
      iii) 20 acres in residential areas at 75 - 100 units/acre = 1,500 - 2,000 units.
   b) St. Lawrence Project - potential - 3,700 units.
   c) King/Niagara Redevelopment Plan - 80,000 sq.ft. at 800 sq.ft. per unit = 225 units.
   d) King/Bathurst Redevelopment Plan - 487,000 sq.ft. at

800 sq. ft per unit = 609 units.

e) Davisville lands project estimate by Planning Department = 1,100 units.

Borough of North York

1 & 2. Paterson Housing Policy Study (Table 13) - includes units in draft or final plan approval stage, and on-site servicing, site plan approval or building permit stage of development process - excludes 4,859 units under construction.

3 & 4 Paterson Housing Policy Study (Table 13) - includes units described as dormant, in concept plan stage, in distinct plan amendment or by-law amendment stage, and in preliminary discussion stage.

Borough of Scarborough

1 & 2. Estimated unit potential relating to vacant zoned residential lands totals 22,268 units, of which an estimated 15.0% have received draft or final sub-division plan approval according to the planning department. No estimate available of the units for which subdivision applications have been submitted but not approved and, therefore, entire balance of 18,928 units shown simply as zoned units.

Borough of Etobicoke

1 & 2. Damas and Smith Housing Policy Programs study - 760 acres of vacant land recommended for development of 9,414 units - development proposals have been received for the above according to local planning department.

3. Damas and Smith Housing Policy Programs study - 42 acres identified for redevelopment of 2,710 units.

Borough of York

1. Paterson Housing Policy Study - 'no action required' units - relates to projects for which by-laws passed by council and approved by OMB.

2. Paterson Housing Policy Study - specific site survey units for which applications for subdivision or redevelopment are being processed.

3. Paterson Housing Policy Study - total potential net increase in residential units estimated at 19,280 - 20,735 units less units cited in 1 & 2 above.

City of Mississauga

1 & 2. Region of Peel Planning Department:
3,994 Single detached units at 4 units/acre - 999 acres
3,216 Semi-detached units at 6 units/acre - 536 acres
5,170 Multiple units at 14 units/acre - 370 acres
7,357 Apartment units at 50 units/acre - 147 acres

3 & 4. City of Mississauga Planning Department includes all applications outstanding December 1975 plus infill potential based on community studies.

5. City of Mississauga Planning Department - based on development alternatives currently proposed and under study for traffic zones north of Highway 5.

City of Brampton

1,2, & 3. Data provided by City of Brampton Planning Department.

Town of Caledon

1 & 2. Planner estimates 100 acres are subject of subdivision applications. Estimate of 400 units based on factor of 4 units/acre.

3. Planner estimates 300 acres of zoned residential land are in local villages and another 1,300 acres are zoned for estate residential development.

Town of Markham

1. Units listed are termed 'designated'. This can mean lands designated for residential use by the latest official plan amendment adopted by council, and/or lands zoned for residential use, and/or lands on which developments have received the approval of council.

Town of Richmond Hill

These preliminary estimates have to be confirmed.

1. Planning Department from listing of subdivision applications.
2. Planning Department estimate from Official Plan.

Town of Newmarket

1. Have draft plan approval.
2. Includes 285 apartment units not expected to be completed before 1985. Of remaining 2,979 units, only 2,400 units may receive final approval due to sewer capacity limitations

3 & 4 Estimates by Planning Department.

Town of Vaughan

1 & 2. Planning Department estimates that 275 acres are proposed and in the process of obtaining subdivision approvals. Estimate of units based on 3.7 units/acre per Planning Department.

3. Planning Department estimate of Official Plan designated lands.

King Township

1 & 2. Planning Department estimates that 792 acres are proposed for subdivision at 2 units per acre.

3. Planning Department estimate of vacant zoned residential land for which subdivision proposals or applications have yet to be made.
4. Planning Department estimate of designated residential land under Official Plan still to be zoned and subdivided.

Town of Aurora

1 & 2. Regional Planning Department and local building department from listings of approved subdivisions and subdivision applications.

3 & 4. Regional Planner's estimates.

Town of Whitchurch - Stouffville

1 & 2. Secretary of the Planning Board from list of subdivision proposals.

3. Secretary of Planning Board estimate of vacant zoned residential land.
4. Secretary of the Planning Board estimate of designated lands under Official Plan. Application for subdivision expected soon.

Town of Oakville

1 & 2. Planning Department listing of approved subdivision plans.

3 & 4. Planning Department from listing of subdivision applications.

5. Planning Department estimate.

6. Planning Department unable to provide estimate of designated land under Official Plan which is neither zoned nor subdivided.

Town of Halton Hills

1 & 2. Planning Department from listing of approved subdivision plans.

3. Planning Department from listing of subdivision applications.

5. Planning Department estimate from local Official Plan.

Town of Milton

1 & 2. Planning Department from listing of approved subdivision plans.

3 & 4. Planning Department estimates about 250 acres are subject to subdivision applications. Unit total of 1,500 is estimate based on 6 units/acre.

Towns of Ajax and Pickering

These preliminary estimates by local Planning Departments have still to be confirmed by them:

1. Includes 6,000 units in Ajax and 4,069 units in Pickering.

2 & 3. Relates to Pickering only.

4. Relates to Pickering only.

5. Includes 700 acres in Pickering and 400 acres in Ajax.

APPENDIX D

SOURCES OF DATA ON SUBDIVISION ACTIVITY AND BUILDING PERMITS ISSUED IN THE TORONTO CMA

1. Subdivision Activity

The Plans Administration Branch of the Ontario Ministry of Housing maintains a summary record of all applications for plans of subdivision in the Province. From these were selected all plans under which building lots were registered between January 1, 1973 and June 30, 1975. The date of application, the number of lots applied for, the date on which the lots were registered, and the name of the applicant were recorded for each of these plans.

In principle, the lot count on the summary data refers only to single family and semi-detached dwellings. One lot may be the site for one single-detached or two semi-detached dwellings. Row housing and apartment units are excluded. However, in a number of cases, multiple units had clearly been included in the lot count. It was not practical to refer back to the original files to verify or correct all the information recorded on the summary records, since these files are voluminous, difficult to interpret, and often in dead storage. However it was possible, through the co-operation of Ministry officials, to cross check the detailed records of 15 plans of subdivision, including all those with lot counts exceeding 400 units. On the basis of this information, two cases were eliminated and the lot count on five others revised downwards by a total of 5,139 units. The vast majority of the units eliminated were actually apartments, a few were row houses and the remainder were lots designated for semi-detached dwellings incorrectly counted as two units each.

In aggregating the data by developer, obvious variations in spelling were eliminated, lots registered by defunct predecessor companies were attributed to successor companies (e.g., Cadillac Development Corp. lots were attributed to Cadillac Fairview) and joint ventures were attributed to the larger partner.

2. Building Permits

Details of building permits issued in the Toronto CMA were collected from the records of the individual municipalities. The original data give the name and address of applicant, location of construction, intended use, class of work (whether new, addition, conversion etc.), estimated value of construction and the number of new dwelling units created. Only the month of application, applicant, classification and number of units were extracted. Only new construction was included. Data were aggregated by builder in the same manner as described for sub-division units.

APPENDIX E

LEADING DEVELOPERS AND BUILDERS BY REGION

The following tables give the names and market shares of all developers and builders with more than one percent of the relevant market for the entire Toronto CMA and for each region separately.

TABLE E-1: LEADING DEVELOPERS OF BUILDING LOTS, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

SUBDIVISION UNITS: ALL AREAS

DEVELOPERS	NO. OF UNITS	% MKT. SHARE	CUM. MKT. SHARE
BRAMALEA CONSOL. DEV. LTD.	1532.	8.2	8.18
WIMPEY HOMES LTD.	1481.	7.9	16.08
CADILLAC FAIRVIEW CORP.	1428.	7.6	23.71
ONTARIO HOUSING CORP.	1032.	5.5	29.21
CONSOLIDATED BUILDING CORP. LTD.	912.	4.9	34.08
MARKBOROUGH PROPERTIES LTD.	722.	3.9	37.94
VICTORIA WOOD DEVELOPMENT CORP	645.	3.4	41.38
MORENISH LAND DEV.	615.	3.3	44.66
MONARCH CONSTRUCTION LTD.	547.	2.9	47.58
WOODBRIDGE WEST DEV. LTD.	427.	2.3	49.86
WEST HILL REDEVELOPMENT CO.	325.	1.7	51.60
DELTAN REALTY LTD.	310.	1.7	53.25
DUNNING + TAYLOR	306.	1.6	54.88
HERSKOVITZ, MRS. D.	304.	1.6	56.51
SCHICKEDANZ DEV. + NEWMARKET, TO	296.	1.6	58.09
JAVIC HOLDINGS LTD.	238.	1.3	59.36
ALLIANCE BUILDING CORP. LTD.	234.	1.2	60.61
PINETREE DEV. + WEST HILL DEV.	229.	1.2	61.83
HALTON LAND GROUP + DAYLITE	226.	1.2	63.04
GOLDENBOY INVESTMENT GROUP	225.	1.2	64.24
K. + R. DEVELOPMENTS	211.	1.1	65.36
ANTHONY, F.	201.	1.1	66.44
UNITED LANDS CORP. LTD.	200.	1.1	67.50
WELSH, J.	200.	1.1	68.57
TOTAL	18734.		100.00

HERFINDAHL INDEX: .0332

TABLE E-1 (cont'd) LEADING DEVELOPERS OF BUILDING LOTS, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

SUBDIVISION UNITS: DURHAM

DEVELOPERS	NO. OF UNITS	% MKT. SHARE	CUM. MKT. SHARE
WIMPEY HOMES LTD.	473.	42.9	42.88
GOLDENBOY INVESTMENT GROUP	225.	20.4	63.28
LAWRENCE AVENUE INVESTMENTS	186.	16.9	80.15
PICKERING DEVELOPMENTS	122.	11.1	91.21
BIDWELL HOMES LTD.	45.	4.1	95.29
COVENTRY GROUP LTD.	27.	2.4	97.73
DUFFINS ESTATES LTD.	25.	2.3	100.00
TOTAL	1103.		100.00

HERFINDAHL INDEX: .2690

SUBDIVISION UNITS: HALTON

DEVELOPERS	NO. OF UNITS	% MKT. SHARE	CUM. MKT. SHARE
WIMPEY HOMES LTD.	387.	21.3	21.35
HALTON LAND GROUP + DAYLITE	226.	12.5	33.81
VICTORIA WOOD DEVELOPMENT CORP	201.	11.1	44.90
D.M. CONSULTANTS LTD.	169.	9.3	54.22
HULAD DEVELOPMENTS LTD.	126.	6.9	61.17
NELL INVESTMENTS LTD.	111.	6.1	67.29
RICENBERG DEVELOPMENTS LTD.	109.	6.0	73.30
LABREISS INVESTMENTS LTD.	102.	5.6	78.93
MILTON HEIGHTS INVESTMENTS LTD.	67.	3.7	82.63
GLENAT HOLDINGS LTD.	50.	2.8	85.38
INFACT INVESTMENTS LTD.	48.	2.6	88.03
ALLIANCE BUILDING CORP. LTD.	43.	2.4	90.40
ARKENDO DEVELOPMENTS LTD.	38.	2.1	92.50
KELLY, P.J., CONSTRUCTION LTD.	27.	1.5	93.99
CRANSTON GRIESE	25.	1.4	95.37
OLD STUMP FENCE DEV. LTD.	21.	1.2	96.52
TOTAL	1813.		100.00

HERFINDAHL INDEX: .1020

TABLE E-1 (cont'd) LEADING DEVELOPERS OF BUILDING LOTS, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

SUBDIVISION UNITS: METRO

DEVELOPERS	NO. OF UNITS	% MKT. SHARE	CUM. MKT. SHARE
ONTARIO HOUSING CORP.	857.	17.6	17.59
MONARCH CONSTRUCTION LTD.	547.	11.2	28.81
CONSOLIDATED BUILDING CORP. LTD.	438.	9.0	37.80
WIMPEY HOMES LTD.	370.	7.6	45.39
WEST HILL REDEVELOPMENT CO.	325.	6.7	52.06
DELTAN REALTY LTD.	310.	6.4	58.42
PINETREE DEV. + WEST HILL DEV.	229.	4.7	63.12
ANTHONY, F.	201.	4.1	67.25
ALLIANCE BUILDING CORP. LTD.	191.	3.9	71.17
BRADFORD INVESTMENTS	171.	3.5	74.68
MAISONETTE DEV. LTD.	163.	3.3	78.02
J.F.M. DEVELOPMENTS LTD.	124.	2.5	80.57
THOMPSON, O. D.	101.	2.1	82.64
RUNNEYMEDE DEV.	98.	2.0	84.65
TOTAL	4873.		100.00

HERFINDAHL INDEX: .0759

TABLE E-1 (cont'd) LEADING DEVELOPERS OF BUILDING LOTS, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

SUBDIVISION UNITS: YORK

DEVELOPERS	NO. OF UNITS	% MKT. SHARE	CUM. MKT. SHARE
WOODBRIDGE WEST DEV. LTD.	427.	20.0	20.03
HERSKOVITZ, MRS. D.	304.	14.3	34.29
SCHICKEDANZ DEV. + NEWMARKET, TO	296.	13.9	48.17
K. + R. DEVELOPMENTS	211.	9.9	58.07
SUCCESS BLDG. + THICKETWOOD DEVE	180.	8.4	66.51
SUNCREST CONSTRUCTION LTD.	94.	4.4	70.92
BISLEY-CAMERON DEV. LTD.	92.	4.3	75.23
MATJON PROPERTIES LTD.	67.	3.1	78.38
CLOUTER, C.	61.	2.9	81.24
LUTES CONSTRUCTION CO. LTD.	60.	2.8	84.05
TANANA INVESTMENTS LTD.	49.	2.3	86.35
KINGSCROSS ESTATES LTD.	43.	2.0	88.37
COLLARD, B.	41.	1.9	90.29
VROOM DEVELOPMENTS(CENTRAL)LTD.	30.	1.4	91.70
GEORGINA, TOWNSHIP OF	27.	1.3	92.96
VAUGHAN ESTATES LTD.	25.	1.2	94.14
BRIARS ESTATES LTD.	24.	1.1	95.26
TOTAL	2132.		100.00

HERFINDAHL INDEX: .1053

TABLE E-1 (cont'd) LEADING DEVELOPERS OF BUILDING LOTS, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

SUBDIVISION UNITS: PEEL

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
BRAMALEA CONSOL. DEV. LTD.	1532.	17.4	17.38
CADILLAC FAIRVIEW CORP.	1428.	16.2	33.59
MARKBOROUGH PROPERTIES LTD.	722.	8.2	41.78
MORENISH LAND DEV.	615.	7.0	48.76
CONSOLIDATED BUILDING CORP.LTD.	474.	5.4	54.14
VICTORIA WOOD DEVELOPMENT CORP	444.	5.0	59.17
DUNNING + TAYLOR	306.	3.5	62.65
WIMPEY HOMES LTD.	251.	2.8	65.49
JAVIC HOLDINGS LTD.	238.	2.7	68.19
UNITED LANDS CORP. LTD.	200.	2.3	70.46
WELSH, J.	200.	2.3	72.73
ONTARIO HOUSING CORP.	175.	2.0	74.72
PERLMAC HOLD. + TORTOWN CONST.	146.	1.7	76.38
ORSI CONST. + VENTA INVEST. LTD.	142.	1.6	77.99
REVENUE PROP. CENTRAL DEV.	138.	1.6	79.55
YOUNG, SAM	115.	1.3	80.86
FARANTATOS, G. N.	114.	1.3	82.15
BAYCREST HOMES	113.	1.3	83.43
MAIDA CONSTRUCTION	90.	1.0	84.45
TOTAL	8813.		100.00

HERFINDAHL INDEX: .0797

TABLE E-2: LEADING DEVELOPERS OF CONDOMINIUM APARTMENTS, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

CONDOMINIUM APARTMENTS: ALL AREAS

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
FLEMINGDON PARK CONDOMINIUMS	910.	11.8	11.82
MODULAR PRECAST DEVLPMNT YORK	864.	11.2	23.04
DEL ZOTTO ENTERPRISES LTD.	646.	8.4	31.43
RIVER DELL HOLDINGS LTD.	588.	7.6	39.07
FLOWERTOWN INVESTMENTS LTD. +TIP	351.	4.6	43.62
VICTORIA WOOD DEVELOPMENT CORP	302.	3.9	47.55
KUHLWIN CONSTRUCTION LTD.	276.	3.6	51.13
LONGMOOR BLDG. CO.	270.	3.5	54.64
OGEE HOLDINGS LTD.	266.	3.5	58.09
DORAMAXIM INVESTMENTS LTD	254.	3.3	61.39
KUHLMAX DEVELOPMENT LTD	230.	3.0	64.38
ARSANDO INVESTMENTS LTD.	223.	2.9	67.27
CROSSROAD APARTMENTS LTD.	218.	2.8	70.10
STRATHMORE DEVELOPMENT CO.	216.	2.8	72.91
HALLIWELL TERRACE LTD.	198.	2.6	75.48
CADILLAC FAIRVIEW CORP.	180.	2.3	77.82
STEELES-HILDA DEVELOPMENTS LTD	178.	2.3	80.13
PALMDALE DEVELOPMENTS LTD.	171.	2.2	82.35
OAKSTONE NEWS	160.	2.1	84.43
DALECORE CONSTRUCTION LTD.	153.	2.0	86.42
COSTAIN ESTATES LTD.	140.	1.8	88.23
WOBURN GATE LTD.	140.	1.8	90.05
DOMAIN PROPERTIES LTD.	114.	1.5	91.53
ROCHE DEVELOPMENTS LTD.	112.	1.5	92.99
MARILLA HOLDINGS LTD.	105.	1.4	94.35
KEW BEACH DEVELOPMENTS LTD.	84.	1.1	95.44
TOTAL	7700.		100.00

HERFINDAHL INDEX: .0559

CONDOMINIUM APARTMENTS: HALTON

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
VICTORIA WOOD DEVELOPMENT CORP	165.	100.0	100.00
TOTAL	165.		100.00

HERFINDAHL INDEX: 1.0000

TABLE E-2 (cont'd): LEADING DEVELOPERS OF CONDOMINIUM APARTMENTS, TORONTO CMA AND REGIONS JANUARY 1, 1973-JUNE 30, 1975

CONDOMINIUM APARTMENTS: METRO

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
FLEMINGDON PARK CONDOMINIUMS	910.	14.0	14.04
MODULAR PRECAST DEVLPMNT YORK	864.	13.3	27.37
DEL ZOTTO ENTERPRISES LTD.	646.	10.0	37.33
RIVER DELL HOLDINGS LTD.	588.	9.1	46.41
KUHLWIN CONSTRUCTION LTD.	276.	4.3	50.66
LONGMOOR BLDG. CO.	270.	4.2	54.83
OGEE HOLDINGS LTD.	266.	4.1	58.93
DORAMAXIM INVESTMENTS LTD	254.	3.9	62.85
KUHLMAX DEVELOPMENT LTD	230.	3.5	66.40
ARSANDO INVESTMENTS LTD.	223.	3.4	69.84
CROSSROAD APARTMENTS LTD.	218.	3.4	73.20
STRATHMORE DEVELOPMENT CO.	216.	3.3	76.54
HALLIWELL TERRACE LTD.	198.	3.1	79.59
CADILLAC FAIRVIEW CORP.	180.	2.8	82.37
STEELES-HILDA DEVELOPMENTS LTD	178.	2.7	85.11
PALMDALE DEVELOPMENTS LTD.	171.	2.6	87.75
OAKSTONE NEWS	160.	2.5	90.22
DALECORE CONSTRUCTION LTD.	153.	2.4	92.58
MARILLA HOLDINGS LTD.	105.	1.6	94.20
VICTORIA WOOD DEVELOPMENT CORP	89.	1.4	95.57
KEW BEACH DEVELOPMENTS LTD.	84.	1.3	96.87
GAZA INVESTMENTS LTD.	65.	1.0	97.87
TOTAL	6482.		100.00

HERFINDAHL INDEX: .0723

TABLE E-2 (cont'd): LEADING DEVELOPERS OF CONDOMINIUM APARTMENTS, TORONTO CMA AND REGIONS
JANUARY 1, 1973-JUNE 30, 1975

CONDOMINIUM APARTMENTS: YORK

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
COSTAIN ESTATES LTD.	140.	50.0	50.00
WOBURN GATE LTD.	140.	50.0	100.00
TOTAL	280.		100.00

HERFINDAHL INDEX: .5000

CONDOMINIUM APARTMENTS: PEEL

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
FLOWERTOWN INVESTMENTS LTD. +TIP	351.	45.4	45.41
DOMAIN PROPERTIES LTD.	114.	14.7	60.16
ROCHE DEVELOPMENTS LTD.	112.	14.5	74.64
KANEFF CONSTRUCTION LTD.	51.	6.6	81.24
HARBOUR VIEW INVESTMENTS LTD.	49.	6.3	87.58
VICTORIA WOOD DEVELOPMENT CORP	48.	6.2	93.79
LANET BUILDING CORP.LTD.	48.	6.2	100.00
TOTAL	773.		100.00

HERFINDAHL INDEX: .2650

TABLE E-3: LEADING DEVELOPERS OF CONDOMINIUM TOWNHOUSES, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

CONDOMINIUM TOWNHOUSE: ALL AREAS

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
EASTCAN HOLDINGS LTD.	726.	7.7	7.74
ROCKPORT HOLDINGS LTD.	600.	6.4	14.14
WHITEHALL DEVELOPMENT CORP.LTD	435.	4.6	18.78
VICTORIA WOOD DEVELOPMENT CORP	431.	4.6	23.37
CADILLAC FAIRVIEW CORP.	351.	3.7	27.12
COVENTRY GROUP LTD.	322.	3.4	30.55
BAYSHORE ERIN GLEN LTD.	310.	3.3	33.86
SILVER ROSE CONSTRUCTION LTD.	275.	2.9	36.79
BRAHAMGATE INVESTMENTS LTD.	231.	2.5	39.25
DELTAN REALTY LTD.	226.	2.4	41.66
PALACE PIER CO.LTD.	216.	2.3	43.96
ROYAL TRUST CO.	211.	2.2	46.21
SINGULAR INVESTMENTS LTD.	204.	2.2	48.39
WIMPEY HOMES LTD.	181.	1.9	50.32
MCLAUGHLIN,S.B. ASSOC. LTD.	173.	1.8	52.16
DUNJON PROPERTY LTD.	169.	1.8	53.97
JARWIN CONSTRUCTION LTD.	148.	1.6	55.54
HOMECO INVESTMENTS	142.	1.5	57.06
ALTEO CONSTRUCTION LTD.	139.	1.5	58.54
DARCEL CONSTRUCTION CO.	136.	1.5	59.99
NORFINCH CONSTRUCTION-TORONTO	134.	1.4	61.42
WESTBURY DEVELOPMENTS	120.	1.3	62.70
LORNAL CONSTRUCTION LTD.	113.	1.2	63.90
MARVIN DEVELOPMENTS LTD.	112.	1.2	65.10
RANEFF CONSTRUCTION LTD.	108.	1.2	66.25
CATULLUS SECURITIES LTD.	102.	1.1	67.34
BRAMALEA CONSOL. DEV. LTD.	97.	1.0	68.37
TOTAL	9378.		100.00

HERFINDAHL INDEX: .0266

TABLE E-3 (cont'd): LEADING DEVELOPERS OF CONDOMINIUM TOWNHOUSES, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

CONDOMINIUM TOWNHOUSE: DURHAM

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
BRAMALEA CONSOL. DEV. LTD.	97.	44.7	44.70
DUFFINS CREEK ESTATES LTD.	63.	29.0	73.73
WESTBURY EAST	57.	26.3	100.00
TOTAL	217.		100.00

HERFINDAHL INDEX: .3531

CONDOMINIUM TOWNHOUSE: HALTON

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
ALTEO CONSTRUCTION LTD.	139.	24.6	24.60
VICTORIA WOOD DEVELOPMENT CORP	85.	15.0	39.65
A.G.Z DEVELOPMENT LTD.	67.	11.9	51.50
PITFIELD CONSTRUCTION LTD.	66.	11.7	63.19
TREASURY TRAIL HOLDINGS LTD.	60.	10.6	73.81
DARABAN HOLDINGS LTD.	52.	9.2	83.01
FIDELITAS BUILDERS LTD.	50.	8.8	91.86
UNDISCLOSED	46.	8.1	100.00
TOTAL	565.		100.00

HERFINDAHL INDEX: .1451

TABLE E-3 (cont'd): LEADING DEVELOPERS OF CONDOMINIUM TOWNHOUSES, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

CONDOMINIUM TOWNHOUSE: METRO

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
EASTCAN HOLDINGS LTD.	569.	13.5	13.48
ROCKPORT HOLDINGS LTD.	440.	10.4	23.90
WHITEHALL DEVELOPMENT CORP.LTD	435.	10.3	34.20
BRAHAMGATE INVESTMENTS LTD.	231.	5.5	39.67
ROYAL TRUST CO.	211.	5.0	44.67
SINGULAR INVESTMENTS LTD.	204.	4.8	49.50
WIMPEY HOMES LTD.	181.	4.3	53.79
CADILLAC FAIRVIEW CORP.	149.	3.5	57.32
WESTBURY DEVELOPMENTS	120.	2.8	60.16
CATULLUS SECURITIES LTD.	102.	2.4	62.58
COVENTRY GROUP LTD.	95.	2.3	64.83
WEST MALL DEVELOPMENTS LTD	92.	2.2	67.01
CANYON TOWERS	90.	2.1	69.14
PEEL VILLAGE DEVELOPMENTS CO.	89.	2.1	71.25
RONDELL REALTY LTD	86.	2.0	73.28
EXCELLENT HOMES LTD.	85.	2.0	75.30
GREAT PYRENEES DEVELOPMENT LTD	77.	1.8	77.12
OAKDALE GLEN HOMES	74.	1.8	78.87
GLENWAY HOMES LTD.	65.	1.5	80.41
MANDO INVESTMENT CO.LTD.	65.	1.5	81.95
STELLGATE INVESTMENTS LTD	63.	1.5	83.44
BROOKMILL DEVELOPMENTS LTD.	60.	1.4	84.86
FLEMINGDON PARK CONDOMINIUMS	59.	1.4	86.26
VROOM DEVELOPMENTS(CENTRAL)LTD.	56.	1.3	87.59
DELTAN REALTY LTD.	55.	1.3	88.89
DARUTH DEVELOPMENTS LTD.	55.	1.3	90.19
ENDERBY DEVELOPMENTS LTD.	54.	1.3	91.47
PALINDALE DEVELOPMENTS LTD.	52.	1.2	92.70
FIELDGATE DEVELOPMENTS	43.	1.0	93.72
TOTAL	4222.		100.00

HERFINDAHL INDEX: .0577

TABLE E-3 (cont'd): LEADING DEVELOPERS OF CONDOMINIUM TOWNHOUSES, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

CONDOMINIUM TOWNHOUSE: YORK

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
DELTAN REALTY LTD.	171.	20.3	20.26
EASTCAN HOLDINGS LTD.	157.	18.6	38.86
CADILLAC FAIRVIEW CORP.	119.	14.1	52.96
272651 ONTARIO LTD.	77.	9.1	62.09
AURORA GARDEN HOMES INC.	53.	6.3	68.36
DR.PAIERO+RUPELL CONST. LTD.	52.	6.2	74.53
BACCARAT DEVELOPMENTS LTD.	44.	5.2	79.74
REALTY CAPITAL INVESTMENT LTD.	44.	5.2	84.95
WESTSHORE HOMES TANGLEWOOD LTD	41.	4.9	89.81
ALLIANCE BUILDING CORP. LTD.	26.	3.1	92.89
STROBEL,MR.	24.	2.8	95.73
ANDI CONSTRUCTION LTD.	15.	1.8	97.51
SHARADAN BUILDERS INC.	12.	1.4	98.93
POINTNER,MRS.IVY	9.	1.1	100.00
TOTAL	844.		100.00

HERFINDAHL INDEX: .1218

TABLE E-3 (cont'd): LEADING DEVELOPERS OF CONDOMINIUM TOWNHOUSES, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

CONDOMINIUM TOWNHOUSE: PEEL

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
VICTORIA WOOD DEVELOPMENT CORP	346.	9.8	9.80
BAYSHORE ERIN GLEN LTD.	310.	8.8	18.58
SILVER ROSE CONSTRUCTION LTD.	275.	7.8	26.37
COVENTRY GROUP LTD.	227.	6.4	32.80
PALACE PIER CO.LTD.	216.	6.1	38.92
MCLAUGHLIN,S.B. ASSOC. LTD.	173.	4.9	43.82
DUNJON PROPERTY LTD.	169.	4.8	48.61
ROCKPORT HOLDINGS LTD.	160.	4.5	53.14
JARWIN CONSTRUCTION LTD.	148.	4.2	57.34
HOMECO INVESTMENTS	142.	4.0	61.36
DARCEL CONSTRUCTION CO.	136.	3.9	65.21
NORFINCH CONSTRUCTION-TORONTO	134.	3.8	69.01
LORNAL CONSTRUCTION LTD.	113.	3.2	72.21
MARVIN DEVELOPMENTS LTD.	112.	3.2	75.38
RANEFF CONSTRUCTION LTD.	108.	3.1	78.44
COSTAIN ESTATES LTD.	87.	2.5	80.91
CONSOLIDATED BUILDING CORP.LTD.	85.	2.4	83.31
CADILLAC FAIRVIEW CORP.	83.	2.4	85.67
ANGLO YORK INDUSTRIAL LTD.	74.	2.1	87.76
LARCHWOOD CONSTRUCTION CO.LTD.	68.	1.9	89.69
DAVEY SYSTEMS+MANAGEMENT CORP.	66.	1.9	91.56
JAYSON,PAUL	60.	1.7	93.26
VILLAGE DEVELOPMENTS	52.	1.5	94.73
240091 REALTY LTD.	50.	1.4	96.15
MCCLINTOCK CHARNWOOD HOMES LTD	49.	1.4	97.54
TOTAL	3530.		100.00

HERFINDAHL INDEX: .0513

TABLE E-4: LEADING DEVELOPERS OF BUILDING LOTS, CONDOMINIUM APARTMENTS AND CONDOMINIUM TOWNHOUSES COMBINED, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

TOTAL UNITS: ALL AREAS

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
CADILLAC FAIRVIEW CORP.	1959.	5.4	5.42
WIMPEY HOMES LTD.	1662.	4.6	10.02
BRAMALEA CONSOL. DEV. LTD.	1629.	4.5	14.53
VICTORIA WOOD DEVELOPMENT CORP	1378.	3.8	18.34
CONSOLIDATED BUILDING CORP.LTD.	1157.	3.2	21.54
ONTARIO HOUSING CORP.	1032.	2.9	24.40
FLEMINGDON PARK CONDOMINIUMS	969.	2.7	27.08
MODULAR PRECAST DEVLPMNT YORK	864.	2.4	29.47
EASTCAN HOLDINGS LTD.	726.	2.0	31.48
MARKBOROUGH PROPERTIES LTD.	722.	2.0	33.48
DEL ZOTTO ENTERPRISES LTD.	646.	1.8	35.27
MORENISH LAND DEV.	615.	1.7	36.97
ROCKPORT HOLDINGS LTD.	600.	1.7	38.63
RIVER DELL HOLDINGS LTD.	588.	1.6	40.26
MONARCH CONSTRUCTION LTD.	565.	1.6	41.82
DELTAN REALTY LTD.	536.	1.5	43.30
WHITEHALL DEVELOPMENT CORP.LTD	435.	1.2	44.51
WOODBRIDGE WEST DEV. LTD.	427.	1.2	45.69
TOTAL	36137.		100.00

HERFINDAHL INDEX: .0167

TOTAL UNITS: DURHAM

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
WIMPEY HOMES LTD.	473.	35.8	35.83
GOLDENROY INVESTMENT GROUP	225.	17.0	52.88
LAWRENCE AVENUE INVESTMENTS	186.	14.1	66.97
PICKERING DEVELOPMENTS	122.	9.2	76.21
BRAMALEA CONSOL. DEV. LTD.	97.	7.3	83.56
DUFFINS CREEK ESTATES LTD.	63.	4.8	88.33
WESTBURY EAST	57.	4.3	92.65
BIDWELL HOMES LTD.	45.	3.4	96.06
COVENTRY GROUP LTD.	27.	2.0	98.11
DUFFINS ESTATES LTD.	25.	1.9	100.00
TOTAL	1320.		100.00

HERFINDAHL INDEX: .1973

TABLE E-4 (cont'd): LEADING DEVELOPERS OF BUILDING LOTS, CONDOMINIUM APARTMENTS AND CONDOMINIUM TOWNHOUSES COMBINED, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

TOTAL UNITS: HALTON

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
VICTORIA WOOD DEVELOPMENT CORP	451.	17.7	17.74
WIMPEY HOMES LTD.	387.	15.2	32.95
HALTON LAND GROUP + DAYLITE	226.	8.9	41.84
D.M. CONSULTANTS LTD.	169.	6.6	48.49
ALTEO CONSTRUCTION LTD.	139.	5.5	53.95
HULAD DEVELOPMENTS LTD.	126.	5.0	58.91
NELL INVESTMENTS LTD.	111.	4.4	63.27
RICENBERG DEVELOPMENTS LTD.	109.	4.3	67.56
LABREISS INVESTMENTS LTD.	102.	4.0	71.57
A.G.Z DEVELOPMENT LTD.	67.	2.6	74.20
MILTON HEIGHTS INVESTMENTS LTD.	67.	2.6	76.84
PITFIELD CONSTRUCTION LTD.	66.	2.6	79.43
TREASURY TRAIL HOLDINGS LTD.	60.	2.4	81.79
DARABAN HOLDINGS LTD.	52.	2.0	83.84
FIDELITAS BUILDERS LTD.	50.	2.0	85.80
GLENAT HOLDINGS LTD.	50.	2.0	87.77
INFACT INVESTMENTS LTD.	48.	1.9	89.66
UNDISCLOSED	46.	1.8	91.47
ALLIANCE BUILDING CORP. LTD.	43.	1.7	93.16
ARKENDO DEVELOPMENTS LTD.	38.	1.5	94.65
KELLY, P.J., CONSTRUCTION LTD.	27.	1.1	95.71
TOTAL	2543.		100.00

HERFINDAHL INDEX: .0831

TABLE E-4 (cont'd): LEADING DEVELOPERS OF BUILDING LOTS, CONDOMINIUM APARTMENTS AND CONDOMINIUM TOWNHOUSES COMBINED, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

TOTAL UNITS: METRO

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
FLEMINGDON PARK CONDOMINIUMS	969.	6.1	6.09
MODULAR PRECAST DEVLPMNT YORK	864.	5.4	11.53
ONTARIO HOUSING CORP.	857.	5.4	16.92
DEL ZOTTO ENTERPRISES LTD.	646.	4.1	20.98
CONSOLIDATED BUILDING CORP.LTD.	598.	3.8	24.74
RIVER DELL HOLDINGS LTD.	588.	3.7	28.44
EASTCAN HOLDINGS LTD.	569.	3.6	32.01
MONARCH CONSTRUCTION LTD.	565.	3.6	35.57
WIMPEY HOMES LTD.	551.	3.5	39.03
ROCKPORT HOLDINGS LTD.	440.	2.8	41.80
WHITEHALL DEVELOPMENT CORP.LTD	435.	2.7	44.54
DELTAN REALTY LTD.	365.	2.3	46.83
CADILLAC FAIRVIEW CORP.	329.	2.1	48.90
WEST HILL REDEVELOPMENT CO.	325.	2.0	50.94
KUHLWIN CONSTRUCTION LTD.	276.	1.7	52.68
LONGMOOR BLDG. CO.	270.	1.7	54.38
OGEE HOLDINGS LTD.	266.	1.7	56.05
DORAMAXIM INVESTMENTS LTD	254.	1.6	57.65
BRAHAMGATE INVESTMENTS LTD.	231.	1.5	59.10
KUHLMAX DEVELOPMENT LTD	230.	1.4	60.55
PINETREE DEV. + WEST HILL DEV.	229.	1.4	61.99
ARSANDO INVESTMENTS LTD.	223.	1.4	63.39
CROSSROAD APARTMENTS LTD.	218.	1.4	64.76
STRATHMORE DEVELOPMENT CO.	216.	1.4	66.12
ROYAL TRUST CO.	211.	1.3	67.44
SINGULAR INVESTMENTS LTD.	204.	1.3	68.73
ANTHONY, F.	201.	1.3	69.99
HALLIWELL TERRACE LTD.	198.	1.2	71.24
ALLIANCE BUILDING CORP. LTD.	191.	1.2	72.44
STEELES-HILDA DEVELOPMENTS LTD	178.	1.1	73.56
BRADFORD INVESTMENTS	171.	1.1	74.63
PALMDALE DEVELOPMENTS LTD.	171.	1.1	75.71
MAISONETTE DEV. LTD.	163.	1.0	76.73
OAKSTONE NEWS	160.	1.0	77.74
TOTAL	15902.		100.00

HERFINDAHL INDEX: .0253

TABLE E-4 (cont'd): LEADING DEVELOPERS OF BUILDING LOTS, CONDOMINIUM APARTMENTS AND CONDOMINIUM TOWNHOUSES COMBINED, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

TOTAL UNITS: YORK

DEVELOPERS	NO. OF UNITS	% MKT. SHARE	CUM. MKT. SHARE
WOODBRIDGE WEST DEV. LTD.	427.	13.1	13.11
HERSKOVITZ, MRS. D.	304.	9.3	22.45
SCHICKEDANZ DEV. + NEWMARKET, TO	296.	9.1	31.54
K. + R. DEVELOPMENTS	211.	6.5	38.02
SUCCESS BLDG. + THICKETWOOD DEVE	180.	5.5	43.55
DELTAN REALTY LTD.	171.	5.3	48.80
EASTCAN HOLDINGS LTD.	157.	4.8	53.62
COSTAIN ESTATES LTD.	140.	4.3	57.92
WOBURN GATE LTD.	140.	4.3	62.22
CADILLAC FAIRVIEW CORP.	119.	3.7	65.88
SUNCREST CONSTRUCTION LTD.	94.	2.9	68.77
BISLEY-CAMERON DEV. LTD.	92.	2.8	71.59
272651 ONTARIO LTD.	77.	2.4	73.96
MATJON PROPERTIES LTD.	67.	2.1	76.01
CLOUTER, C.	61.	1.9	77.89
LUTES CONSTRUCTION CO. LTD.	60.	1.8	79.73
AURORA GARDEN HOMES INC.	53.	1.6	81.36
DR.PAIERO+RUPELL CONST. LTD.	52.	1.6	82.95
TANANA INVESTMENTS LTD.	49.	1.5	84.46
BACCARAT DEVELOPMENTS LTD.	44.	1.4	85.81
REALTY CAPITAL INVESTMENT LTD.	44.	1.4	87.16
KINGSCROSS ESTATES LTD.	43.	1.3	88.48
COLLARD, B.	41.	1.3	89.74
WESTSHORE HOMES TANGLEWOOD LTD	41.	1.3	91.00
TOTAL	3256.		100.00

HERFINDAHL INDEX: .0570

TABLE E-4 (cont'd): LEADING DEVELOPERS OF BUILDING LOTS, CONDOMINIUM APARTMENTS AND CONDOMINIUM TOWNHOUSES COMBINED, TORONTO CMA AND REGIONS, JANUARY 1, 1973-JUNE 30, 1975

TOTAL UNITS: PEEL

DEVELOPERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
BRAMALEA CONSOL. DEV. LTD.	1532.	11.7	11.68
CADILLAC FAIRVIEW CORP.	1511.	11.5	23.20
VICTORIA WOOD DEVELOPMENT CORP	838.	6.4	29.59
MARKBOROUGH PROPERTIES LTD.	722.	5.5	35.09
MORENISH LAND DEV.	615.	4.7	39.78
CONSOLIDATED BUILDING CORP.LTD.	559.	4.3	44.05
FLOWERTOWN INVESTMENTS LTD. +TIP	351.	2.7	46.72
BAYSHORE ERIN GLEN LTD.	310.	2.4	49.09
DUNNING + TAYLOR	306.	2.3	51.42
SILVER ROSE CONSTRUCTION LTD.	275.	2.1	53.51
WIMPEY HOMES LTD.	251.	1.9	55.43
JAVIC HOLDINGS LTD.	238.	1.8	57.24
COVENTRY GROUP LTD.	227.	1.7	58.97
PALACE PIER CO.LTD.	216.	1.6	60.62
UNITED LANDS CORP. LTD.	200.	1.5	62.15
WELSH, J.	200.	1.5	63.67
ONTARIO HOUSING CORP.	175.	1.3	65.00
MCLAUGHLIN,S.B. ASSOC. LTD.	173.	1.3	66.32
DUNJON PROPERTY LTD.	169.	1.3	67.61
DARCEL CONSTRUCTION CO.	168.	1.3	68.89
ROCKPORT HOLDINGS LTD.	160.	1.2	70.11
JARWIN CONSTRUCTION LTD.	148.	1.1	71.24
PERLMAC HOLD. + TORTOWN CONST.	146.	1.1	72.35
HOMECO INVESTMENTS	142.	1.1	73.44
ORSI CONST. + VENTA INVEST. LTD.	142.	1.1	74.52
REVENUE PROP. CENTRAL DEV.	138.	1.1	75.57
NORFINCH CONSTRUCTION-TORONTO	134.	1.0	76.59
TOTAL	13116.		100.00

HERFINDAHL INDEX: .0448

TABLE E-5: LEADING BUILDERS, APARTMENTS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL APARTMENTS: ALL AREAS

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
CADILLAC FAIRVIEW CORP.	3859.	7.2	7.19
DELTAN REALTY LTD.	3002.	5.6	12.78
SULLIVAN, W.B., CONSTRUCTION	1757.	3.3	16.06
ARSANDCO INVESTMENTS LTD.	1568.	2.9	18.98
VICTORIA WOOD DEV. CORP.	1217.	2.3	21.25
CONSOLIDATED BLDG. CORP.	1191.	2.2	23.47
LORNAL CONSTRUCTION LIMITED	1160.	2.2	25.63
JANE WILSON TOWERS LTD.	1144.	2.1	27.76
HOWARD INVESTMENTS	1081.	2.0	29.77
237446 INVESTMENTS LTD.	1066.	2.0	31.76
RUNNYMEDF DEV.	1051.	2.0	33.72
GREENWIN DEV.	920.	1.7	35.43
MCLAUGHLIN, S.B., ASSOC. LTD.	919.	1.7	37.14
STARKMAN, A.	910.	1.7	38.84
NEIGHBORHOOD DEV. LTD.	898.	1.7	40.51
LIBERATOR DEV.	827.	1.5	42.05
GOLDLIST CONST. LTD.	812.	1.5	43.57
TORCAN CONSTRUCTION	701.	1.3	44.87
RANK YONGE-SHEPPARD DEV. LTD.	661.	1.2	46.10
MCILWRAITH, G.T., WINMAR INV.	656.	1.2	47.33
WINDLASSHOLD LTD.	612.	1.1	48.47
SOLMOR BUILDERS LTD.	610.	1.1	49.60
BARONY ESTATES LTD.	596.	1.1	50.71
METRO TORONTO HOUSING	595.	1.1	51.82
HEATHCLIFFE DEV. LTD.	573.	1.1	52.89
P.M. INVESTMENTS	563.	1.0	53.94
CAMPEAU CORP. LTD.	538.	1.0	54.94
TOTAL	53671.		100.00

HERFINDAHL INDEX: .0186

TABLE E-5 (cont'd): LEADING BUILDERS, APARTMENTS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL APARTMENTS: DURHAM

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
SHOREHAM APT. LTD.	398.	68.9	68.86
NORTHDOWN HOMES	180.	31.1	100.00
TOTAL	578.		100.00

HERFINDAHL INDEX: .5711

ALL APARTMENTS: HALTON

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
RELIANCE DEVELOPMENT CO	266.	20.9	20.91
TAVISTOCK CONSTRUCTION LTD.	230.	18.1	38.99
WYMARK DEVELOPMENT CORP.	205.	16.1	55.11
ONTARIO HOUSING CORP.	185.	14.5	69.65
VICTORIA WOOD DEV. CORP.	165.	13.0	82.63
ALTONA HOLDINGS LTD.	110.	8.6	91.27
DEVELOPMENT RESOURCES LIMITED	75.	5.9	97.17
286440 ONTARIO ST.	30.	2.4	99.53
TOTAL	1272.		100.00

HERFINDAHL INDEX: .1519

TABLE E-5 (cont'd): LEADING BUILDERS, APARTMENTS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL APARTMENTS: METRO

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
CADILLAC FAIRVIEW CORP.	3124.	7.4	7.38
DELTAN REALTY LTD.	2774.	6.6	13.93
SULLIVAN, W.B., CONSTRUCTION	1757.	4.2	18.08
ARSANDCO INVESTMENTS LTD.	1568.	3.7	21.79
JANE WILSON TOWERS LTD.	1144.	2.7	24.49
HOWARD INVESTMENTS	1081.	2.6	27.04
237446 INVESTMENTS LTD.	1066.	2.5	29.56
RUNNYMEDE DEV.	1051.	2.5	32.04
GREENWIN DEV.	920.	2.2	34.22
STARKMAN, A.	910.	2.1	36.37
NEIGHBORHOOD DEV. LTD.	898.	2.1	38.49
CONSOLIDATED BLDG. CORP.	843.	2.0	40.48
LIBERATOR DEV.	827.	2.0	42.43
LORNAL CONSTRUCTION LIMITED	751.	1.8	44.21
TORCAN CONSTRUCTION	701.	1.7	45.86
RANK YONGE-SHEPPARD DEV. LTD.	661.	1.6	47.42
MCILWRAITH, G.T., WINMAR INV.	656.	1.5	48.97
WINDLASSHOLD LTD.	612.	1.4	50.42
BARONY ESTATES LTD.	596.	1.4	51.83
METRO TORONTO HOUSING	595.	1.4	53.23
HEATHCLIFFE DEV. LTD.	573.	1.4	54.58
P.M. INVESTMENTS	563.	1.3	55.91
CAMPEAU CORP. LTD.	538.	1.3	57.19
MARKLAND WOODS GARDENS	532.	1.3	58.44
PEEKSKILL DEV. LTD.	526.	1.2	59.68
SANDSPRINGS PLANNING + DEV.	510.	1.2	60.89
ECHOD INVEST. LTD.	499.	1.2	62.07
BRIMLEY FOREST DEV. LTD.	476.	1.1	63.19
HOME SMITH PROP.	461.	1.1	64.28
WEST HILL REDEVELOPMENT	447.	1.1	65.34
HILLTOP HEIGHTS DEV.	445.	1.1	66.39
KUHL CONSTRUCTION CO. LTD.	445.	1.1	67.44
VICTORIA WOOD DEV. CORP.	438.	1.0	68.47
TOTAL	42334.		100.00

HERFINDAHL INDEX: .0228

TABLE E-5 (cont'd): LEADING BUILDERS, APARTMENTS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL APARTMENTS: YORK

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
CADILLAC FAIRVIEW CORP.	663.	39.2	39.18
RAYEL CONST.	200.	11.8	51.00
COSMIC CONST. LTD.	200.	11.8	62.83
VINCENT COURT APT. LTD.	149.	8.8	71.63
GOLDLIST CONST. LTD.	140.	8.3	79.91
ROUGEBANK FOUNDATION	118.	7.0	86.88
DONDEB CONST.	83.	4.9	91.78
KENNEDY PARK PROPERTIES	73.	4.3	96.10
MENNONITE HOME ASS.	36.	2.1	98.23
ONTARIO HOUSING CORP.	29.	1.7	99.94
TOTAL	1692.		100.00

HERFINDAHL INDEX: .2060

TABLE E-5 (cont'd): LEADING BUILDERS, APARTMENTS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL APARTMENTS: PEEL

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
MCLAUGHLIN, S.B., ASSOC. LTD.	919.	11.8	11.79
GOLDLIST CONST. LTD.	672.	8.6	20.41
VICTORIA WOOD DEV. CORP.	614.	7.9	28.29
SOLMOR BUILDERS LTD.	610.	7.8	36.11
EASTCAN HOLDINGS	535.	6.9	42.98
LORNAL CONSTRUCTION LIMITED	409.	5.2	48.22
LAKEVIEW FOREST DEV. LTD.	382.	4.9	53.12
CONSOLIDATED BLDG. CORP.	348.	4.5	57.59
KANEFF CONSTRUCTION LIMITED	334.	4.3	61.87
CARBONDALE HOLDINGS LIMITED	288.	3.7	65.57
DOMAIN PROPERTIES LIMITED	267.	3.4	68.99
GLOBAL HOUSE SECURITIES INC.	261.	3.3	72.34
DELTAN REALTY LTD.	228.	2.9	75.27
RAEBYRNE DEVELOPMENTS LTD.	218.	2.8	78.06
QUANDRA PROPERTY DEV. LTD.	212.	2.7	80.78
WORLAND HOLDINGS LIMITED	202.	2.6	83.37
TONBRIDGE SQUARE	186.	2.4	85.76
POPOV CONSTRUCTION CO + KANEFF	177.	2.3	88.03
M. & V. INVESTMENTS	140.	1.8	89.83
WELGLEN LIMITED	137.	1.8	91.58
VAUGHANFIELD CONST.	125.	1.6	93.19
KENNEDY RD. TABERNACLE	123.	1.6	94.77
REUSSE, R., CONST. CO. LTD.	121.	1.6	96.32
TOTAL	7795.		100.00

HERFINDAHL INDEX: .0568

TABLE E-6: LEADING BUILDERS, GROUND UNITS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL GROUND UNITS: ALL AREAS

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
WIMPEY HOMES LTD.	1529.	3.5	3.53
CADILLAC FAIRVIEW CORP.	1407.	3.3	6.78
VICTORIA WOOD DEV. CORP.	1244.	2.9	9.66
COVENTRY GROUP	1051.	2.4	12.08
PASTORIA HOLDINGS LTD.	1047.	2.4	14.50
CONSOLIDATED BLDG. CORP.	944.	2.2	16.68
WHITEHALL DEVELOPMENT CORP.	909.	2.1	18.78
BRAMALEA CONSOLIDATED	870.	2.0	20.79
SILVER ROSE CONSTRUCTION	848.	2.0	22.75
SULLIVAN, W.B., CONSTRUCTION	833.	1.9	24.67
ONTARIO HOUSING CORP.	677.	1.6	26.24
NORTHDOWN HOMES	653.	1.5	27.75
RUNNYMEDE DEV.	644.	1.5	29.23
DELTAN REALTY LTD.	564.	1.3	30.54
SCHIKHEDANZ BROS.	521.	1.2	31.74
CENTRAL PARK DEV.	515.	1.2	32.93
TUDOR GLEN HOMES	477.	1.1	34.03
MONARCH CONST. LTD.	456.	1.1	35.09
EASTCAN HOLDINGS	445.	1.0	36.11
TOTAL	43291.		100.00

HERFINDAHL INDEX: .0095

TABLE E-6 (cont'd): LEADING BUILDERS, GROUND UNITS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL GROUND UNITS: DURHAM

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
WIMPEY HOMES LTD.	630.	22.1	22.07
TUDOR GLEN HOMES	398.	13.9	36.01
RUNNYMEDE DEV.	265.	9.3	45.29
WESTBURY DEVELOPMENTS	162.	5.7	50.96
JUSTINE HOLDINGS LTD.	144.	5.0	56.01
ROCKPORT HOMES LTD.	139.	4.9	60.88
J.D.S. LTD.	123.	4.3	65.18
VICTORIA WOOD DEV. CORP.	121.	4.2	69.42
ROSEFIELD DEV.	86.	3.0	72.43
STATELY HOMES LTD.	85.	3.0	75.41
BAY SQUARE LTD.	84.	2.9	78.35
G.R.W. CONSTRUCTION LTD.	71.	2.5	80.84
NORFINCH CONST.	68.	2.4	83.22
BRAMALEA CONSOLIDATED	53.	1.9	85.08
PARK FOREST ESTATES	48.	1.7	86.76
JACOBSEN, J., CONST. LTD.	42.	1.5	88.23
E.F.R. DEV.	36.	1.3	89.49
NORTHDOWN HOMES	35.	1.2	90.72
R. & L. CONST.	32.	1.1	91.84
BIDWELL HOMES	30.	1.1	92.89
TOTAL	2855.		100.00

HERFINDAHL INDEX: .0940

TABLE E-6 (cont'd): LEADING BUILDERS, GROUND UNITS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL GROUND UNITS: HALTON

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
WIMPEY HOMES LTD.	651.	14.6	14.64
VICTORIA WOOD DEV. CORP.	263.	5.9	20.55
ALTEO CONSTRUCTION LTD.	228.	5.1	25.68
MCNAMARA CORP. LTD.	164.	3.7	29.37
REVEL BUILDERS (1972) LTD.	157.	3.5	32.90
HOMECO INVESTMENTS LTD.	139.	3.1	36.02
ACADEMY CONSOLIDATED	128.	2.9	38.90
MCCLINTOCK HOMES	123.	2.8	41.67
ALLIANCE BLDG CORP.	118.	2.7	44.32
HOPEDALE DEVELOPMENTS LIMITED	115.	2.6	46.91
PITFIELD CONST. LTD.	115.	2.6	49.49
STATELY HOMES LTD.	115.	2.6	52.08
EASTCREST HOMES	109.	2.5	54.53
NORTHDOWN HOMES	83.	1.9	56.40
ELKTON INVESTMENTS LTD.	77.	1.7	58.13
WESTBURY DEVELOPMENTS	70.	1.6	59.70
A.G.Z. DEVELOPMENTS LTD.	67.	1.5	61.21
ADEPT CONSTRUCTION LTD.	61.	1.4	62.58
PARADISE HOMES	61.	1.4	63.95
TREASURY TRAIL HOLDINGS LTD.	60.	1.3	65.30
ROSDOC DEVELOPMENTS	47.	1.1	66.36
HEARLEY BUILDING CORP.	46.	1.0	67.39
NORTH HARDING DEVELOPMENTS LTD	46.	1.0	68.43
GRAND FORUM ESTATES LTD.	45.	1.0	69.44
TOTAL	4447.		100.00

HERFINDAHL INDEX: .0391

TABLE E-6 (cont'd): LEADING BUILDERS, GROUND UNITS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL GROUND UNITS: METRO

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
ONTARIO HOUSING CORP.	676.	4.4	4.37
SILVER ROSE CONSTRUCTION	660.	4.3	8.64
WHITEHALL DEVELOPMENT CORP.	569.	3.7	12.32
DELTAN REALTY LTD.	564.	3.6	15.96
COVENTRY GROUP	479.	3.1	19.06
MONARCH CONST. LTD.	456.	2.9	22.01
RUNNYMEDE DEV.	379.	2.5	24.46
CADILLAC FAIRVIEW CORP.	336.	2.2	26.63
EASTCAN HOLDINGS	288.	1.9	28.49
SULLIVAN, W.B., CONSTRUCTION	265.	1.7	30.21
PASTORIA HOLDINGS LTD.	222.	1.4	31.64
SAMUEL SARICK LIMITED	214.	1.4	33.03
NORTHDOWN HOMES	213.	1.4	34.40
PARK ROYAL CONST.	197.	1.3	35.68
WIMPEY HOMES LTD.	184.	1.2	36.87
KINGS LAKE PARK DEV.	182.	1.2	38.04
COUGHLAN CONST. CO. ,J.F.	175.	1.1	39.18
GREENWIN DEV.	170.	1.1	40.28
BIRCH MEADOW OUTLOOK CO.	159.	1.0	41.30
TOTAL	15466.		100.00

HERFINDAHL INDEX: .0131

TABLE E-6 (cont'd): LEADING BUILDERS, GROUND UNITS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL GROUND UNITS: PEEL

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
CONSOLIDATED BLDG. CORP.	862.	6.1	6.08
PASTORIA HOLDINGS LTD.	825.	5.8	11.90
BRAMALEA CONSOLIDATED	817.	5.8	17.66
VICTORIA WOOD DEV. CORP.	539.	3.8	21.47
COVENTRY GROUP	529.	3.7	25.20
SULLIVAN, W.B., CONSTRUCTION	516.	3.6	28.84
CENTRAL PARK DEV.	515.	3.6	32.47
CADILLAC FAIRVIEW CORP.	375.	2.6	35.12
WHITEHALL DEVELOPMENT CORP.	340.	2.4	37.51
COSTAIN ESTATES LTD.	298.	2.1	39.62
CELLAN HOMES LIMITED	259.	1.8	41.44
VROOM DEV. LTD.	245.	1.7	43.17
MCLAUGHLIN, S.B., ASSOC. LTD.	239.	1.7	44.86
KANEFF CONSTRUCTION LIMITED	221.	1.6	46.42
GEORGIAN HOMES	217.	1.5	47.95
PHILMOR DEVELOPMENTS LTD.	200.	1.4	49.36
WELGLEN LIMITED	186.	1.3	50.67
COUNTRY CLUB ESTATES	160.	1.1	51.80
FIELDGATE DEVELOPMENTS LTD.	147.	1.0	52.84
HOMECO INVESTMENTS LTD.	142.	1.0	53.84
TOTAL	14176.		100.00

HERFINDAHL INDEX: .0217

TABLE E-6 (cont'd): LEADING BUILDERS, GROUND UNITS ONLY, TORONTO CMA AND REGIONS, 1973-1975

ALL GROUND UNITS: YORK

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
CADILLAC FAIRVIEW CORP.	696.	11.0	10.97
SCHIKHEDANZ BROS.	521.	8.2	19.17
SUNFIELD REALTY LTD.	383.	6.0	25.21
LADYFIELD CONST.	355.	5.6	30.80
WYCLIFFE GROUP	220.	3.5	34.27
VICTORIA WOOD DEV. CORP.	207.	3.3	37.53
NORTHDOWN HOMES	205.	3.2	40.76
RAYEL CONST.	200.	3.2	43.91
BAYCREST HOMES	194.	3.1	46.97
EASTCAN HOLDINGS	157.	2.5	49.44
CHARINGTON GATE DEV.	141.	2.2	51.66
SILVER ROSE CONSTRUCTION	81.	1.3	52.94
TUDOR GLEN HOMES	78.	1.2	54.17
4-WAY HOLDINGS LTD.	77.	1.2	55.38
SIDNEY HOMES LTD.	75.	1.2	56.56
MCNAMARA CORP. LTD.	70.	1.1	57.67
ROTMOUNT HOMES	68.	1.1	58.74
WIMPEY HOMES LTD.	64.	1.0	59.74
TOTAL	6347.		100.00

HERFINDAHL INDEX: .0340

TABLE E-7: LEADING BUILDERS, APARTMENT AND GROUND UNITS COMBINED, TORONTO CMA
1973-1975

TOTAL UNITS: ALL AREAS

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
CADILLAC FAIRVIEW CORP.	5266.	5.4	5.43
DELTAN REALTY LTD.	3566.	3.7	[illegible].11
SULLIVAN, W.B., CONSTRUCTION	2590.	2.7	11.78
VICTORIA WOOD DEV. CORP.	2461.	2.5	14.32
CONSOLIDATED BLDG. CORP.	2135.	2.2	16.52
RUNNYMEDE DEV.	1695.	1.7	18.27
ARSANDCO INVESTMENTS LTD.	1568.	1.6	19.89
WIMPEY HOMES LTD.	1529.	1.6	21.46
LORNAL CONSTRUCTION LIMITED	1160.	1.2	22.66
MCLAUGHLIN, S.B., ASSOC. LTD.	1158.	1.2	23.85
JANE WILSON TOWERS LTD.	1144.	1.2	25.03
GREENWIN DEV.	1090.	1.1	26.16
HOWARD INVESTMENTS	1081.	1.1	27.27
237446 INVESTMENTS LTD.	1066.	1.1	28.37
COVENTRY GROUP	1051.	1.1	29.45
PASTORIA HOLDINGS LTD.	1047.	1.1	30.53
EASTCAN HOLDINGS	980.	1.0	31.55
TOTAL	96962.		100.00

HERFINDAHL INDEX: .0104

TABLE E-7 (cont'd): LEADING BUILDERS, APARTMENT AND GROUND UNITS COMBINED, TORONTO CMA, 1973-1975

TOTAL UNITS: DURHAM

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
WIMPEY HOMES LTD.	630.	18.4	18.35
SHOREHAM APT. LTD.	398.	11.6	29.94
TUDOR GLEN HOMES	398.	11.6	41.54
RUNNYMEDE DEV.	265.	7.7	49.26
NORTHDOWN HOMES	215.	6.3	55.52
WESTBURY DEVELOPMENTS	162.	4.7	60.24
JUSTINE HOLDINGS LTD.	144.	4.2	64.43
ROCKPORT HOMES LTD.	139.	4.0	68.48
J.D.S. LTD.	123.	3.6	72.07
VICTORIA WOOD DEV. CORP.	121.	3.5	75.59
ROSEFIELD DEV.	86.	2.5	78.09
STATELY HOMES LTD.	85.	2.5	80.57
BAY SQUARE LTD.	84.	2.4	83.02
G.R.W. CONSTRUCTION LTD.	71.	2.1	85.09
NORFINCH CONST.	68.	2.0	87.07
BRAMALEA CONSOLIDATED	53.	1.5	88.61
PARK FOREST ESTATES	48.	1.4	90.01
JACOBSEN, J., CONST. LTD.	42.	1.2	91.23
E.F.R. DEV.	36.	1.0	92.28
TOTAL	3433.		100.00

HERFINDAHL INDEX: .0823

TABLE E-7 (cont'd): LEADING BUILDERS, APARTMENT AND GROUND UNITS COMBINED, TORONTO CMA, 1973-1975

TOTAL UNITS: HALTON

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
WIMPEY HOMES LTD.	651.	11.4	11.38
VICTORIA WOOD DEV. CORP.	428.	7.5	18.87
RELIANCE DEVELOPMENT CO	266.	4.7	23.52
TAVISTOCK CONSTRUCTION LTD.	230.	4.0	27.54
ALTEO CONSTRUCTION LTD.	228.	4.0	31.53
WYMARK DEVELOPMENT CORP.	205.	3.6	35.11
ONTARIO HOUSING CORP.	185.	3.2	38.35
MCNAMARA CORP. LTD.	164.	2.9	41.21
REVEL BUILDERS (1972) LTD.	157.	2.7	43.96
HOMECO INVESTMENTS LTD.	139.	2.4	46.39
ACADEMY CONSOLIDATED	128.	2.2	48.63
MCCLINTOCK HOMES	123.	2.2	50.78
ALLIANCE BLDG CORP.	118.	2.1	52.84
HOPEDALE DEVELOPMENTS LIMITED	115.	2.0	54.85
PITFIELD CONST. LTD.	115.	2.0	56.86
STATELY HOMES LTD.	115.	2.0	58.87
ALTONA HOLDINGS LTD.	110.	1.9	60.80
EASTCREST HOMES	109.	1.9	62.70
NORTHDOWN HOMES	83.	1.5	64.15
ELKTON INVESTMENTS LTD.	77.	1.3	65.50
DEVELOPMENT RESOURCES LIMITED	75.	1.3	66.81
WESTBURY DEVELOPMENTS	70.	1.2	68.04
A.G.Z. DEVELOPMENTS LTD.	67.	1.2	69.21
ADEPT CONSTRUCTION LTD.	61.	1.1	70.27
PARADISE HOMES	61.	1.1	71.34
TREASURY TRAIL HOLDINGS LTD.	60.	1.0	72.39
TOTAL	5719.		100.00

HERFINDAHL INDEX: .0338

TABLE E-7 (cont'd): LEADING BUILDERS, APARTMENT AND GROUND UNITS COMBINED, TORONTO CMA, 1973-1975

TOTAL UNITS: METRO

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
CADILLAC FAIRVIEW CORP.	3460.	6.0	5.99
DELTAN REALTY LTD.	3338.	5.8	11.76
SULLIVAN, W.B., CONSTRUCTION	2022.	3.5	15.26
ARSANDCO INVESTMENTS LTD.	1568.	2.7	17.97
RUNNYMEDF DEV.	1430.	2.5	20.45
JANE WILSON TOWERS LTD.	1144.	2.0	22.43
GREENWIN DEV.	1090.	1.9	24.31
HOWARD INVESTMENTS	1081.	1.9	26.18
237446 INVESTMENTS LTD.	1066.	1.8	28.03
CONSOLIDATED BLDG. CORP.	925.	1.6	29.63
STARKMAN, A.	910.	1.6	31.20
NEIGHBORHOOD DEV. LTD.	898.	1.6	32.75
LIBERATOR DEV.	827.	1.4	34.19
LORNAL CONSTRUCTION LIMITED	751.	1.3	35.48
TORCAN CONSTRUCTION	701.	1.2	36.70
ONTARIO HOUSING CORP.	676.	1.2	37.87
RANK YONGE-SHEPPARD DEV. LTD.	661.	1.1	39.01
SILVER ROSE CONSTRUCTION	660.	1.1	40.15
MCILWRAITH, G.T., WINMAR INV.	656.	1.1	41.29
WINDLASSHOLD LTD.	612.	1.1	42.35
BARONY ESTATES LTD.	596.	1.0	43.38
METRO TORONTO HOUSING	595.	1.0	44.41
TOTAL	57800.		100.00

HERFINDAHL INDEX: .0154

TABLE E-7 (cont'd): LEADING BUILDERS, APARTMENT AND GROUND UNITS COMBINED, TORONTO CMA, 1973-1975

TOTAL UNITS: PEEL

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
CONSOLIDATED BLDG. CORP.	1210.	5.5	5.51
MCLAUGHLIN, S.B., ASSOC. LTD.	1158.	5.3	10.78
VICTORIA WOOD DEV. CORP.	1153.	5.2	16.03
PASTORIA HOLDINGS LTD.	825.	3.8	19.78
BRAMALEA CONSOLIDATED	817.	3.7	23.50
GOLDLIST CONST. LTD.	672.	3.1	26.56
SOLMOR BUILDERS LTD.	610.	2.8	29.33
KANEFF CONSTRUCTION LIMITED	555.	2.5	31.86
EASTCAN HOLDINGS	535.	2.4	34.30
COVENTRY GROUP	529.	2.4	36.70
SULLIVAN, W.B., CONSTRUCTION	516.	2.3	39.05
CENTRAL PARK DEV.	515.	2.3	41.40
CADILLAC FAIRVIEW CORP.	447.	2.0	43.43
LORNAL CONSTRUCTION LIMITED	409.	1.9	45.29
LAKEVIEW FOREST DEV. LTD.	382.	1.7	47.03
WHITEHALL DEVELOPMENT CORP.	340.	1.5	48.58
WELGLEN LIMITED	323.	1.5	50.05
COSTAIN ESTATES LTD.	298.	1.4	51.40
CARBONDALE HOLDINGS LIMITED	288.	1.3	52.71
DOMAIN PROPERTIES LIMITED	267.	1.2	53.93
GLOBAL HOUSE SECURITIES INC.	263.	1.2	55.13
CELLAN HOMES LIMITED	259.	1.2	56.31
VROOM DEV. LTD.	245.	1.1	57.42
DELTAN REALTY LTD.	228.	1.0	58.46
M. & V. INVESTMENTS	228.	1.0	59.50
TOTAL	21971.		100.00

HERFINDAHL INDEX: .0203

TABLE E-7 (cont'd): LEADING BUILDERS, APARTMENT AND GROUND UNITS COMBINED, TORONTO CMA, 1973-1975

TOTAL UNITS: YORK

BUILDERS	NO.OF UNITS	% MKT.SHARE	CUM.MKT.SHARE
CADILLAC FAIRVIEW CORP.	1359.	16.9	16.91
SCHIKHEDANZ BROS.	521.	6.5	23.39
RAYEL CONST.	400.	5.0	28.36
SUNFIELD REALTY LTD.	383.	4.8	33.13
LADYFIELD CONST.	355.	4.4	37.54
WYCLIFFE GROUP	220.	2.7	40.28
VICTORIA WOOD DEV. CORP.	207.	2.6	42.85
NORTHDOWN HOMES	205.	2.6	45.40
COSMIC CONST. LTD.	200.	2.5	47.89
GOLDLIST CONST. LTD.	195.	2.4	50.32
BAYCREST HOMES	194.	2.4	52.73
EASTCAN HOLDINGS	157.	2.0	54.68
VINCENT COURT APT. LTD.	149.	1.9	56.54
CHARINGTON GATE DEV.	141.	1.8	58.29
ROUGEBANK FOUNDATION	118.	1.5	59.76
DONDEB CONST.	83.	1.0	60.79
SILVER ROSE CONSTRUCTION	81.	1.0	61.80
TOTAL	8039.		100.00

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